

DRAFT

ENVIRONMENTAL ASSESSMENT

**FOR PROPOSED CONSTRUCTION OF A CONSOLIDATED
PRIMARY CARE CLINIC, EUREKA, CA**

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LACO
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1.0 INTRODUCTION

This Environmental Assessment (EA) has been prepared to comply with the National Environmental Policy Act (NEPA) (40 CFR § 1500-1508) and the U.S. Department of Health and Human Services (HHS) General Administration Manual Part 30 Environmental Protection Requirements. The Health Resource and Services Administration (HRSA) is requiring the preparation of an Environmental Assessment (EA), the environmental review process required by the National Environmental Policy Act (NEPA) and its associated environmental laws. This project level environmental review will ensure there are no extraordinary circumstances that exist that are beyond the issues identified and evaluated within this document.

1.1 FORMAT OF THIS ENVIRONMENTAL REVIEW

The format of this Environmental Assessment is based on the format requirements and topical areas of interest of HHS General Administration Manual Part 30.

1.2 BACKGROUND AND PROJECT DESCRIPTION

Open Door Community Health Centers (ODCHC) is a 501(c) (3) not-for-profit corporation incorporated in 1971. The ODCHC is a designated Federally Qualified Health Center and has been a recipient of Section 330(e) CHC funds for 10 years. The ODCHC is the largest provider of primary medical and mental health care and the only provider of dental care for low-income, uninsured, and publicly insured patients in the area. ODCHC offers general medical, dental, family practice, immunizations, pediatrics, women's health, prenatal and birth services, family planning, geriatrics, urgent care, mental health counseling, STD testing and counseling, HIV/AIDS care, alternative medicine, nutritional counseling, health education and smoking cessation within its service area.

ODCHC is proposing to construct a new consolidated health center in Eureka, CA (See Figure 1) to serve its local residents, reduce waste and pollution, by reducing trips, travel time and opportunity for expanded use of public transit, and create new convenient access throughout the ODCHC system. ODCHC operates ten facilities throughout Humboldt County and one in Del Norte County, California (See Figure 2). All ten ODCHC facilities are currently operating at capacity. Building code and lot size restrictions will not allow expansion of any existing ODCHC facilities to the capacity needed.

The project will add approximately 46 new full time employee (FTE) positions and provider FTEs will nearly double. The new center, to be constructed within a mile of two existing clinics, will provide access to care for up to 6,000 new patients; a total of 25,000 new encounters annually, by consolidating and replacing the two inadequate clinics. Integrating modern design with state-of-the-art diagnostic, telehealth, and electronic health systems will ultimately improve health outcomes by facilitating optimal access, productivity, efficiency, treatment protocols, team approaches, patient education and clinic operations. Principles of green design for structure and stormwater, habitat protection, energy efficiency, improved patient flow, and best practice approaches to care combine to make this an exemplary healthcare facility for California's North Coast.

ODCHC is proposing to construct a new medical facility at a vacant 6.6 acre lot within the City limits of Eureka, California. Preliminary conceptual designs of the two-story facility range from 20,000 to 30,000 square-feet. The facility will be constructed adjacent to yet outside of the Eureka Slough setback with access being provided via Tydd Street (See Figure 3).

Figure 1 – General Site Location



Figure 2 – Open Door Community Health Centers Facility Locations

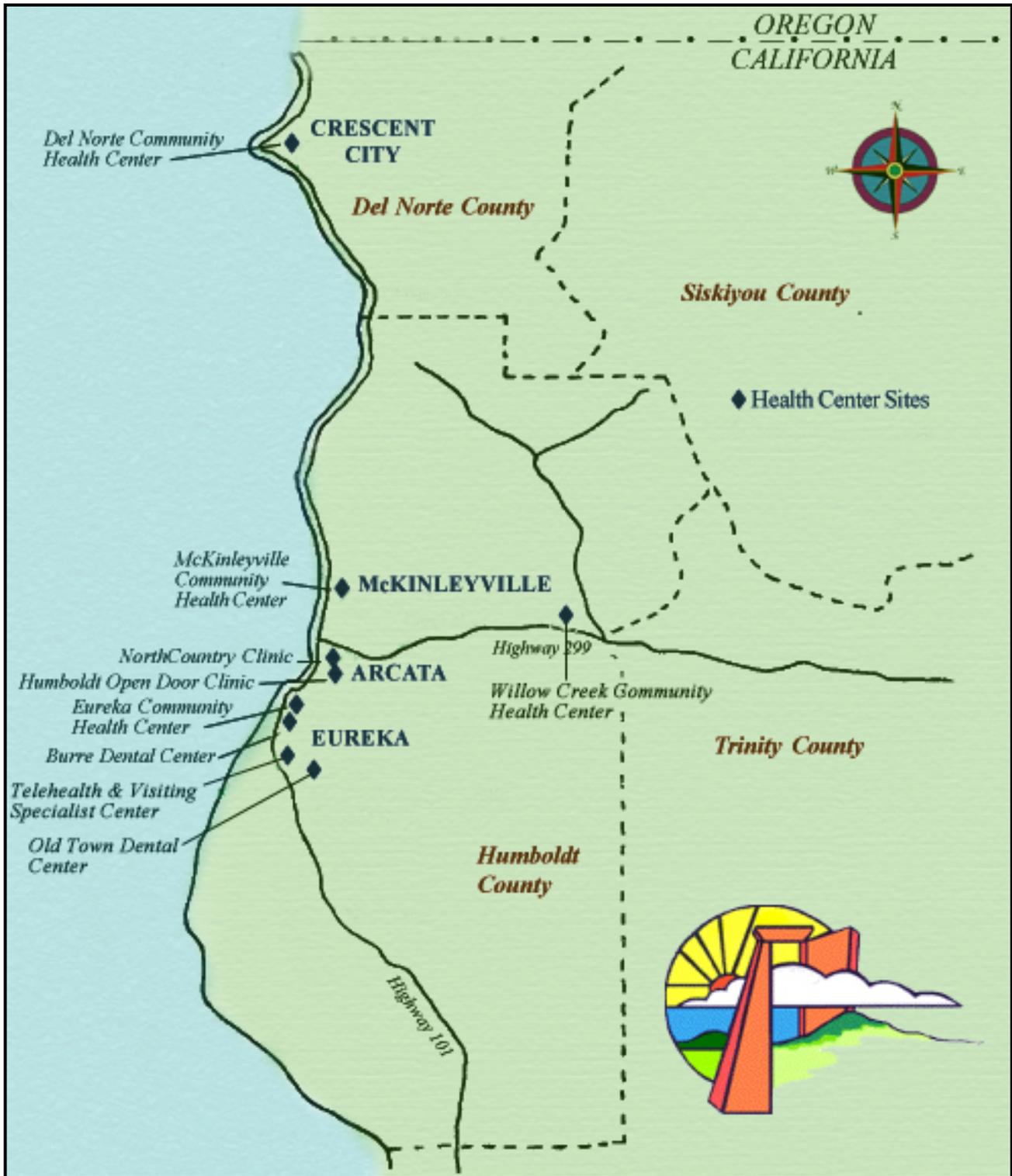


Figure 3 – Conceptual Plan



2.0 PURPOSE AND NEED FOR THE PROJECT

At a combined size of 10,180 square feet and 16 exam rooms, the Eureka Community Health Center (EHC) and the adjacent Telehealth and Visiting Specialist Center (TVSC) are inadequate to serve the more than 12,000 Eureka residents currently enrolled as ODCHC users (fewer than 4,500 Eureka residents can access these clinics, ODCHC Grant application 2010) let alone the demand from new patients and residents from the surrounding areas, causing patients to travel substantial distances to access care at other ODCHC sites in Humboldt and Del Norte Counties. EHC, a 1950s era, maze-like, ADA non-compliant building in need of constant update has been renovated to its limit; lot size restrictions preclude any increase in square footage. TVSC, extensively renovated in 2005, is now too small for the ever-increasing demand for primary, specialty and mental health care. Neither clinic can add providers or services. Access for all but acute care requires a 6 to 8 week wait. Current demands cannot support the optimum continuity of optimum care models.

The purpose of this action is to continue to expand the ODCHC's capacity to manage resources and to enhance health care access, community cohesion, and the expansion of health care for all residents of Humboldt County. The proposed consolidated Eureka Community Health Center more than doubles the space available at EHC and TVSC. Square footage for clinical services increases from the existing 10,180 square feet to approximately 20,000 to 30,000 square feet, increase exam rooms from 16 to 32, and provides space for group activities and staff training. The design will maximize provider productivity, improve work flows and support employee training for licensure. The equipment in this facility will improve diagnostics for routine and specialty care and fully integrates electronic health record and telemedicine technologies.

The purpose of the project is to help satisfy the ODCHC mission to provide health care and education to residents of Humboldt and Del Norte Counties and surrounding rural areas. Through example, education, and participation in the health care community, ODCHC seeks to promote the development of a health care system which meets the needs and enhances the health of all the individuals in our communities.

3.0 PROJECT ALTERNATIVES

This section describes the alternatives considered in the preparation of the Draft EA. The provisions of NEPA regulation 40 CFR 1500.14 requires the study and comparative presentation of the effects of the Proposed Action and Alternative Sites considered as well as the No Action Alternative. In this case, the Proposed Action involves the construction of an approximately 20,000 to 30,000 square-foot medical facility at a vacant 6.6 acre lot within the City limits of Eureka, California. An alternative considered involved the construction of a slightly smaller facility at a different site at the Eureka waterfront. The No Action Alternative would be to not construct the medical facility and allow medical services offered by the ODCHC to remain as “status quo”.

HHS General Administration Manual Part 30 Environmental Protection Requirements requires the applicant agency to consider reasonable alternatives to the proposed federal action as defined in the manual. The three alternatives reviewed include (1) Preferred Alternative; (2) Alternative Sites and (3); No action. The following issues and concerns have been identified as applying to the reviewed alternative actions:

1. Topography, Soil Types and Geological Setting.
2. Water Quality.
3. Air Quality.
4. Wildlife and Vegetation.
5. Historical, Cultural and Archaeological Resources.
6. Community Infrastructure.
7. Transportation Networks.
8. Land Use Plans.
9. Sound and Noise.
10. Aesthetic Values.
11. Employment and Income.
12. Attitudes, Expectations and Cultural Values.

Based on the application of the above requirements, the proposed action and alternative actions are presented below.

3.1 PROPOSED ACTION (PREFERRED ALTERNATIVE)

The ODCHC is proposing to construct an approximate new two-story 20,000 to 30,000 square-foot medical facility at a vacant 6.6 acre lot within the City limits of Eureka, California. The affected parcels include AP #002-191-031, 002-191-028, and 002-191-027 (See Figure 4). Connection of power lines, gas lines, sewer or water lines, communications services and roadways are proposed as part of this project. The proposed facility will include the following design attributes:

Clinical Operations

- Central courtyard to facilitate orientation and movement within the clinic;
- Team approach to treatment supported by identified “Pod” modules;
- Co-location of providers and support staff within pods;
- Multi-purpose examination, treatment and procedures rooms;
- Conveniently centralized laboratory and dispensary;
- Advanced diagnostic equipment;
- High efficiency equipment (Energy Star rated whenever possible);

- Fully integrated electronic practice management and electronic health record system (part of overall ODCHC effort – all clinics utilize same system and have immediate access as necessary to records across corporation and shared network);
- Fully integrated telehealth program;
- Separately controlled access to conference and training rooms allowing public and off-hours use;
- Unobtrusive access controls and security;
- Disaster preparedness;
- Covered patient drop-off and entry area;
- Collection centers for recycling, reuse and composting;
- Furnishings made from non-emitting, renewable and sustainable products where applicable;
- Sitting areas and quiet spaces;
- Immediate proximity to all City of Eureka bus routes (stop and turn-around at property line);
- Virtually immediate proximity (200 yards) to ODCHC primary dental care facility (Burre Dental Center); and,
- Close proximity to regional hospital and related healthcare services.

Green/Sustainable Design and Construction Principles

- Construction waste management program;
- Erosion, sedimentation and fugitive dust control;
- Noise pollution mitigation;
- Light pollution mitigation;
- Permeable paving materials;
- Locally produced certified wood products;
- Sustainable and easily renewable construction materials;
- Easily cleanable finishes;
- Natural daylight for offices and common spaces;
- Natural ventilation;
- Natural finish materials (low- and non-emitting);
- Native landscaping;
- Covered bicycle parking;
- Showers and changing area (serves as decontamination center if necessary);
- Designated parking for low-emission and fuel efficient vehicles;
- Views to native habitat;
- Building orientation, window placement and mass for passive solar benefits;
- Photovoltaic solar arrays for power generation;
- Rainwater collection system for irrigation;
- Vegetated and “cool” roof to reduce “heat island” effect;
- Seismic event mitigation construction (earthquake tolerant design);
- Habitat protection and restoration;
- On-site and near-site public transportation;
- Proximity and access to local business and shopping (including pharmacy) to facilitate consolidated travel; and,
- Storm water run-off control and natural leaching.

This draft Environmental Assessment confirms that the Proposed Action (Preferred Alternative) would not have significant individual or cumulative adverse effects when combined with past, present, and reasonably foreseeable future actions within the project area. With appropriate mitigation measures as described in Table 1, no significant adverse impacts would occur to geology and soils, air quality, water quality, floodplains, wetlands, biological resources, cultural resources, traffic, solid or hazardous materials and waste, noise, or land use. No significant adverse cumulative impacts would occur.

Table 1 – Mitigation Summary Preferred Alternative

Potential Impact	Mitigation Measure
Impacts to Water Quality	This project will follow all State, local regulations regarding runoff, erosion, and construction management (BMP's) employ Low Impact Development design, focus on landscape solutions.
Impacts to Air Quality	This project will follow all State, local regulations regarding construction and operational emissions. Low VOC materials and energy efficient design will be used.
Impacts to Soil	This project will follow State, local regulations related to soil conservation and runoff (such as implementation of BMP's to reduce erosion during construction).
Impacts to Vegetation and Wildlife	The proposed medical center is located in a semi-developed area, so impacts to critical habitat are unlikely. Impacts to any undisturbed natural areas are to be avoided.
Impacts to Wetlands	This project will avoid any disturbance to wetlands or waters of the U.S.
Impact on Historic Qualities or setting of site and/or adjacent site	This project will ensure compliance with Section 106 requirements for any buildings greater than 50 years old, or buildings less than 50 years old where significant events may have taken. Based on the archaeological report conducted for the construction of the facility, and the subsequent SHPO letter of no adverse effect, there is no potential for below ground cultural resources to be impacted during ground disturbing activities. Cultural monitors will be present during any earth moving activities. However, Wiyot cultural monitors will be present during earthmoving activities.
Traffic Delays and Congestion During Construction and Operation	This project will utilize flaggers on affected roads during construction. This project will carefully stage equipment and construction worker's cars during construction.
Impacts to Solid and Hazardous Materials and Wastes	No hazardous materials are present or likely to be present. Based on results of a site visit by a Registered Environmental Assessor, hazardous materials were dealt with in accordance with Federal, State, and local requirements.
Increased Noise Generation	This project will maintain normal daylight hours for construction. Noise restrictions are in place at night and on weekends. This project will comply with State and local noise regulations.
Coastal Zone	The project will comply with all State and local regulations regarding construction within the coastal zone.
Impact on Surrounding Land Uses	This project will follow local land use, zoning and comprehensive plans, as well as related permit processes and ordinances.

3.2 ALTERNATIVES CONSIDERED BUT DISCARDED

Acquisition of an alternative property to meet the growing or increasing needs of the ODCHC was considered and evaluated. This property is located near the Adorni Center in the Eureka Waterfront and is owned by the City of Eureka (See Figure 5). The 7.25 acre site would accommodate up to a 30,000 square foot facility. Although the site is currently vacant, it has experienced a long history of industrial use. In 1854, a lumber mill was built on the site by the Dolbeer and Carson Lumber Company. The mill remained on the site until the early 1980's. During the 126 years that the mill remained on the site, the property changed hands numerous times and housed several different businesses that included oyster farms, furniture factories, and automotive repair facilities.

According to the California Water Resources Control Board (*CASE #: 1NHU330- Samoa Bride Site*), a portion of the waterfront property includes an open remediation site that is contaminated with lead and other metals. Potential media affected includes groundwater, and soil. Although the City of Eureka is in the final stages cleanup activities at the site, construction at this site might be delayed until case closure is achieved. Given the time constraints for meeting the grant objectives of completing construction by September 2012, the alternative site evaluated has been eliminated from further study.

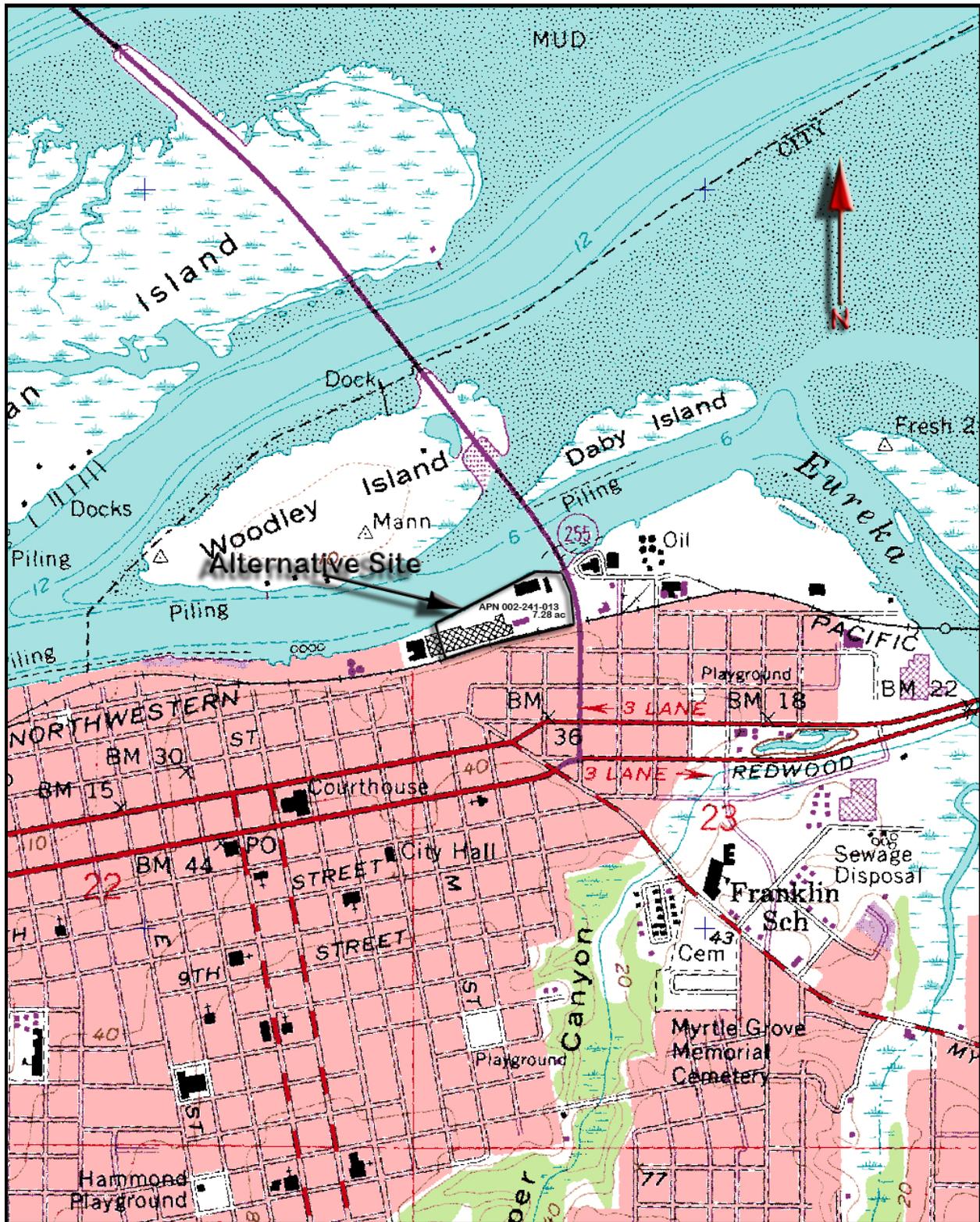
Other alternate locations within the Eureka/Arcata areas were considered. Since none of the alternate locations within the Humboldt Bay area proved to be cost efficient or no longer available, this option was eliminated from further study.

3.3 NO ACTION ALTERNATIVE

The No Action alternative would maintain the size and operations at the existing medical clinic. All ten ODCHC facilities are operating at capacity. Building code and lot size restrictions will not allow expansion of existing ODCHC facilities. ODCHC clients would continue to receive medical, dental, mental health, and social services within the ten undersized facilities.

Thus, the no-action alternative is considered unacceptable by the ODCHC since it fails to meet the mission statement outlined by the charter of the organization.

Figure 5 – Alternative Site – Waterfront Site Location



4.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

4.1 LAND RESOURCES

4.1.1 Topography

The project site is situated in the City of Eureka, California, adjacent to the Eureka Slough. The terrain of the proposed project site is relatively flat and well drained. The lands surrounding the project site are disturbed and developed with general commercial buildings such as Redwood Harley Davidson, the Humboldt County Department of Child Support, CVS Pharmacy and the State Compensation Insurance offices. The Shoreline RV Park is within 500 feet of the site as well as the Salvation Army's Silvercrest Senior Residence, a 150 apartment complex. The project site is within the Eureka 7.5 minute USGS Quadrangle at Section 23, Township 5 North, Range 1 West, Humboldt Meridian. Elevation at the project site ranges from 12 feet to 33 feet.

4.1.2 Soil Types and Characteristics

According to the Soil Survey for Humboldt County, Central Part, the soils present at the project site have not been mapped. Immediately adjacent to the project area, other various soil complexes have not been mapped as well. The area is just outside the mapping included in the *Soils of Western Humboldt County, California* (McLaughlin and Harradine, 1965). Where not identified as Residential/Industrial sites, areas around Humboldt Bay are shown as being underlain by soils of the Bayside series. These soils are typically silty clay loams. The mapped soils nearest the project site are shown as Bayside silty clay loams (Ba6), very poorly drained, zero to 3 percent slopes. Based on site conditions, it is reasonable to assume that this soil type is likely present at the project site as well.

A soils report was completed on and adjacent to the subject parcel in April 2006 (Whitchurch Engineering). According to the boring logs in that soils report, silty sand was observed at depths up to 8 feet for 5 of the 10 test pits or trenches. Groundwater was not observed in the majority of the test pits; however, test pits closest to Eureka Slough did indicate shallow groundwater (40 to 80 inches below grade). Debris including concrete, asphalt, metal pipes, woody debris, and disturbed fill were observed. The conclusions of the soils report indicated that the site was capable of providing adequate support for construction.

Review of the Humboldt County GIS Portal indicates that the subject site is not considered to be prime or unique farmland of state-wide importance.

4.1.3 Geologic Setting

The project area lies within two geomorphic provinces. The dominant geomorphic provinces in the area are the Coast Ranges province in the central and southwest sections of the County, which is comprised mainly of the Franciscan complex inland and sand and other alluvial deposits closer to the coast; and the Klamath Mountains province in the northeast, which is comprised generally of older rocks, many of which are sedimentary (e.g., sandstone, chert, slate, and schist). The project site is within the Coast Range.

The Eureka area basin, located along the moist, forested, sparsely populated northern California coast, consists of unconsolidated deposits that are bound by consolidated and semi-consolidated rocks.

The proposed project site contains no slopes that would be subject to landslides. The site does not exhibit evidence of any landslides.

4.1.4 Seismic Hazards

The offshore and coastal regions of Humboldt County contain one of the most geologically complex areas in California. Three major faults, including the San Andreas, the Mendocino fracture zone, and the southern end of the Cascade subduction zone, all meet in what is known as a "triple junction." Three major plates of the Earth's surface are defined and separated by these faults: the Pacific plate, the Gorda plate and the North American plate. As a result of this unique geologic setting, the North Coast is vulnerable to several types of earthquakes from a variety of sources. Because a triple junction has to accommodate plate motion in several directions, its faulting is varied and its seismicity is high. The geometry of the triple junction renders it unstable, and requires that it change with time. Geological information is limited because much of this area lies under the Pacific Ocean.

Ground shaking during an earthquake can be strong enough to damage structures. There are additional hazards in areas with shallow groundwater due to the effect of liquefaction. Liquefaction occurs in saturated, unconsolidated sediments when ground shaking associated with an earthquake increases the water pressure within the soil and thus causes soil particles to move relative to each other (liquefy). Liquefaction decreases the strength of the soil, reducing the ability of soil to support structures. Shallow groundwater and poorly graded, cohesion-less soils (sands and silts) underlying the project site are conditions conducive to liquefaction during a moderate to strong earthquake.

Published Potential Liquefaction Zones (Humboldt County General Plan Seismic Safety Maps, Humboldt County, 1979) indicate that the project site is underlain by relatively stable alluvium. However, liquefaction of soils adjacent to or underlying structures could cause settlement or lateral displacement of foundation elements, resulting in structural damage. The risks associated with these hazards can be minimized by application of appropriate design/construction techniques.

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (subsequently amended) intends to minimize the hazards posed to people and property during and immediately following earthquakes. This Act generally requires disclosure and avoidance. The Act prohibits the location of developments and structures for human occupancy across the trace of active faults and regulates construction activities in the corridors of earthquake faults zones. The Act prohibits and restricts construction activities and zoning classifications based upon fault activity and fault definition, providing legal definitions for active, sufficiently active, and well-defined faults and establishes a process for reviewing construction proposals in the vicinity of earthquake fault zones. The Act identifies Earthquake Special Study Zones.

There are no Alquist-Priolo Earthquake Fault Zones located on or near the site (Fault-Rupture Hazard Zones in California, Earl W. Hart and William A. Bryant, 1997) thus indicating that no "active faults" (movement occurring in the last 10,000 years) or "potentially active faults" (movement occurring in the last 2 million years) are identified or significantly close to the site. Furthermore, review of the Preliminary Fault Activity Map of California, CDMG Report 92-03, 1992 indicates that no known active faults are mapped either in the site boundaries or on nearby land.

Humboldt County has a number of fault zones mapped under this law. The County uses a combining zone designation ("G") to flag these areas where special geologic study is required to

identify the precise location of active fault traces to ensure structures for human occupancy are not placed astride them. The areas proposed for construction are not located in a Special Study Zone. The closest Alquist-Priolo Earthquake Fault Zone to the project lies to the north – northeast and is associated with the Little Salmon Fault Zone.

The California Geological Survey includes the site as within a low severity zone. The zone corresponds to a probable maximum ground shaking intensity of VI to VII on the Modified Mercalli Scale. The project site is therefore located in Uniform Building Code Seismic Hazard Zone 4.

4.1.5 Mineral Resources

Several mineral resources are located within Humboldt County and they largely involve sand and gravel resources. Mineral resources of local, regional, or national importance do not exist on the project site.

4.2 WATER RESOURCES

Humboldt Bay is the major water body located near the project site. Resembling an hour-glass in configuration, the Bay is long relative to its width, spanning 14 miles in length and ranging in width from 0.5 to 4.0 miles. Humboldt Bay has a surface area of 16,000 acres (23.4 square miles) characterized by tidal flats, channels and freshwater and salt marshes. The Bay is separated from the Pacific Ocean by a sand spit, and is bisected in the center by a shipping channel and rock jetties.

The Bay, under current conditions, essentially represents two shallow, broad tidal flat expanses at the ends of a deeper but smaller embayment, with the tidal flat expanses being of different sizes. The tidal flats are drained by tidal channels, which are shallow at their upper ends but deepen substantially as they enter the inner embayment. Tidewater enters and leaves the Bay through a narrow inlet located at the southern end of the smaller embayment, yielding variations in flood and ebb patterns that cause the two shallow arms to differ from one another in some ways. Tidal elevations in Humboldt Bay have been well documented as having a “mixed semidiurnal” pattern, with two daily high tides and two low tides; the averages of the two highs typically differ substantially, as do the averages of the two lows.

As a general rule, therefore, the Bay does not “turn over” with each tidal exchange; water from different parts of the Bay may remain inside the Bay for one or for a number of tidal cycles. Prior studies have suggested that Entrance Bay experiences a relatively rapid exchange of water with the Pacific Ocean, whereas achieving a nearly complete “turnover” of water in Arcata Bay may require as many as 15 tidal exchanges. There is some evidence that water in both Arcata Bay and South Bay does not mix effectively with the more marine conditions in Entrance Bay, and that water present on the tidal flats may retreat to the deeper channels in Entrance Bay and then move back onto the tidal flats with rising tides.

The Humboldt Bay watershed encompasses approximately 213 square miles. The upper watershed is characterized by steep, forested mountainous terrain and the lower watershed includes agricultural lands and urban community activities. The region typically experiences moderate to cool wet weather. Eighty-five percent of the mean annual precipitation of 40” falls between October and May.

The current hydrological context of the Humboldt Bay watershed is generally that of a landscape that has been subjected to human alteration over virtually 100 percent of its surface during the

past 150 years. Some of the land use changes have had relatively minor long-term hydrological effects (e.g., replacing old-growth forests with younger forests); other land use changes clearly have been associated with substantial changes in runoff characteristics and in the resulting basin hydrology. The most significant changes resulted from urbanization of the watershed.

Hydrologically, runoff patterns associated with developed areas show shifts toward greater storm peaks and shorter delivery periods, usually associated with reduced summertime base flows. The water quality effects of development usually include significant delivery of a large variety of pollutants to the receiving waters, including sediment, various metals, transportation-related hydrocarbons, fertilizers and growth stimulators hormones, biocidal chemicals, and various organic materials that increase demand for oxygen in the receiving waters.

The North Coast Regional Water Quality Control Board (NCRWQCB) administered National Pollutant Discharge Elimination System (NPDES) permits to six facilities discharging to Humboldt Bay including the City of Eureka. The City of Eureka wastewater treatment facility controls discharge releases to coincide with the ebb tide so that disinfected effluent clears the bay mouth and discharges to the ocean.

Non-point source discharge activities which may impact the Bay and surrounding watersheds include domestic livestock, wildlife, migratory fowl, septic systems, horticultural runoff, urban runoff, marina and boating activities related to live-aboard boats, Caltrans and railroad maintenance related activities and rainfall related releases.

The project area lies within the Northern California Coastal Region, Mad-Redwood Creek Hydrologic Area, Eureka Plain Hydrologic Unit and is listed on the USGS Catalog Unit as 180101012. The Eureka Plain Watershed includes approximately 124,617 acres in Humboldt County.

4.2.1 Surface Water

A few hydrologic features exist near the vicinity of the project site. The Eureka Slough is the major surface water resource in the project area and is formed by the confluence of the Freshwater and Ryan Sloughs. Water quality in the Eureka Slough variants are cause by saltwater intrusion due to river flows from the Freshwater and Ryan Sloughs coupled with tidal actions within Humboldt Bay. Brackish water is very common at the Highway 101 Bridge and lessens upstream.

4.2.2 Groundwater

Unconsolidated deposits of sand, gravel, silt, and clay, which are Pliocene Era and younger and primarily of alluvial origin, compose the Eureka area aquifers. Near the coast, the alluvial deposits interfinger with estuarine sediments and locally are underlain by marine sediments. The thickness of the unconsolidated deposits ranges from only a few feet to as much as 1,000 feet. The unconsolidated deposits range from coarse to fine grained. The most permeable deposits are surficial alluvium and dune sands. Virtually all fresh groundwater is withdrawn from these deposits, but deeper beds yield water in some places. The permeability of the unconsolidated sediments varies with location. Consolidated and semi-consolidated rocks of minimal permeability form the boundaries of the aquifer system.

Distinct confining units are scarce in the unconsolidated deposits, but large total thicknesses of fine-grained sediments can impede vertical flow sufficiently to create an increase in hydraulic head with depth. Consequently, depending upon the permeability and depth of the water-

yielding deposits at a particular location, groundwater can be under either confined or unconfined conditions.

The primary fresh groundwater body in the Eureka area is in the Eel River Valley, where groundwater under unconfined, or water table, conditions is available nearly everywhere at depths of 30 feet or less. An exception is in the vicinity of Ferndale, where sediments are fine grained, have minimal permeability, and yield little water to wells except near the mouths of streams, where the sediments are coarse grained and fluvial. A perched water table is above clay beds that form a local confining unit in terrace deposits near the Eel River. Water in the deeper parts of the aquifer in the Eel River Valley, near Humboldt Bay in the Eureka Plain, and in the Mad River Valley, between Eureka and Arcata, is under confined or partially confined conditions.

The aquifer is recharged primarily by runoff from the hills that surround the stream valleys and by seepage from the upper reaches of streams. Minor recharge is by lateral movement of water from adjacent rocks and by direct precipitation. Deeply-buried sediments are recharged by precipitation where they crop out and by leakage from shallower water-yielding beds to which they are hydraulically connected, especially where withdrawals from the deep sediments are sufficient to cause a downward hydraulic gradient. Groundwater movement in the surficial deposits is generally toward the coast, where the water mostly discharges into estuarine reaches of the rivers; some water discharges directly into Humboldt Bay or the Pacific Ocean, or is withdrawn by wells. Water in the deeper sediments is discharged by vertical flow to shallower deposits where the hydraulic gradient is upward, or is withdrawn by deep wells.

4.2.3 Flooding

Approximately seventy percent of the precipitation in Humboldt County occurs from November to March. Major floods have resulted from a succession of intense rainstorms during these months. The two worst flood events in Humboldt County occurred in December 1955 and December 1964. These events caused tens of millions of dollars in damages and also caused numerous fatalities. According to the California State Hazard Mitigation plan, there were nine State proclaimed "states of emergency" for flood events between 1950 and 1997.

The City of Eureka has flood hazards that are attributable to precipitation and tidal influences on the Eureka Slough, which is near the project site. The likelihood of such occurrences is determined by the Federal Emergency Management Agency (FEMA), and areas are zoned accordingly. The proposed ODCHC medical facility lies within an area that was mapped by FEMA. A portion of the project site is situated within a 100-year flood hazard zone. Figure 6 includes the FIRM Panel Map (060062 005C – June 17, 1986) and as can be seen, approximately 20 percent of the site is within the 100-year flood zone but not the portion proposed for development (See Figure 6).

The Cascadia subduction zone threatens California, Oregon and Washington with potentially devastating tsunamis that could strike the coast within minutes. There is increasing geological and seismological evidence that: earthquakes of magnitude 8 or higher have occurred in this region; at least one segment of the subduction zone may be approaching the end of a seismic cycle culminating in such an earthquake; and these earthquakes have generated tsunamis that have caused extensive flooding along the coastlines of California, Oregon and Washington. Tsunami experts estimate that the probability of a Cascadia earthquake occurring is comparable to that of large earthquakes in Southern California (i.e., 35-percent probability of magnitude 8 or higher between 1995 and 2045).

The Level 2 HAZUS-MH protocol (FEMA's risk assessment tool) was used to assess the risk and vulnerability of a tsunami in the planning area. HAZUS-MH uses census data at the block level that is augmented with assessor's data provided by Humboldt County. Although HAZUS-MH does not directly model tsunami damage out of the box, the inputs including damage functions may be changed to help better assess the hazard. To model the tsunami hazard, a tsunami hazard zone was created after reviewing historical events and creating a probable scenario. For Humboldt County, Humboldt State University developed the tsunami hazard areas for a highest hazard and moderate hazard event near the coast (See Figure 7).

The project site is in an area which is a moderate hazard for tsunami and would be subject to the recommended evacuation procedures of the City of Eureka and the County of Humboldt.

The City and County have established signage for both Tsunami Hazard Zones and Tsunami evacuation routes. The ODCHC has also developed an Emergency Operations Plan (EOP) for their facilities and will create a new EOP that will include both flood and tsunami hazards at the new facility.

Figure 6 – FEMA Flood Insurance Rate Map

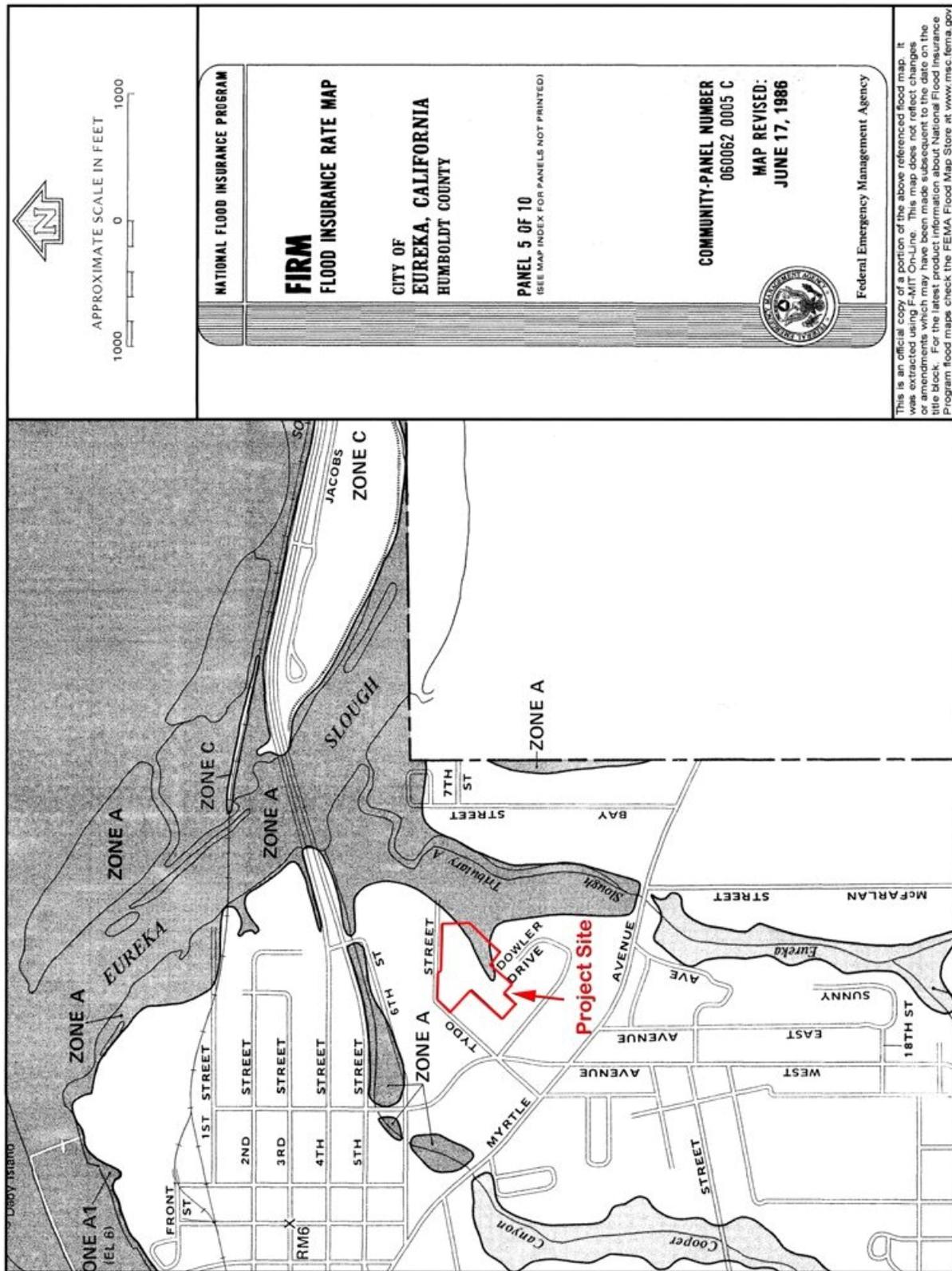
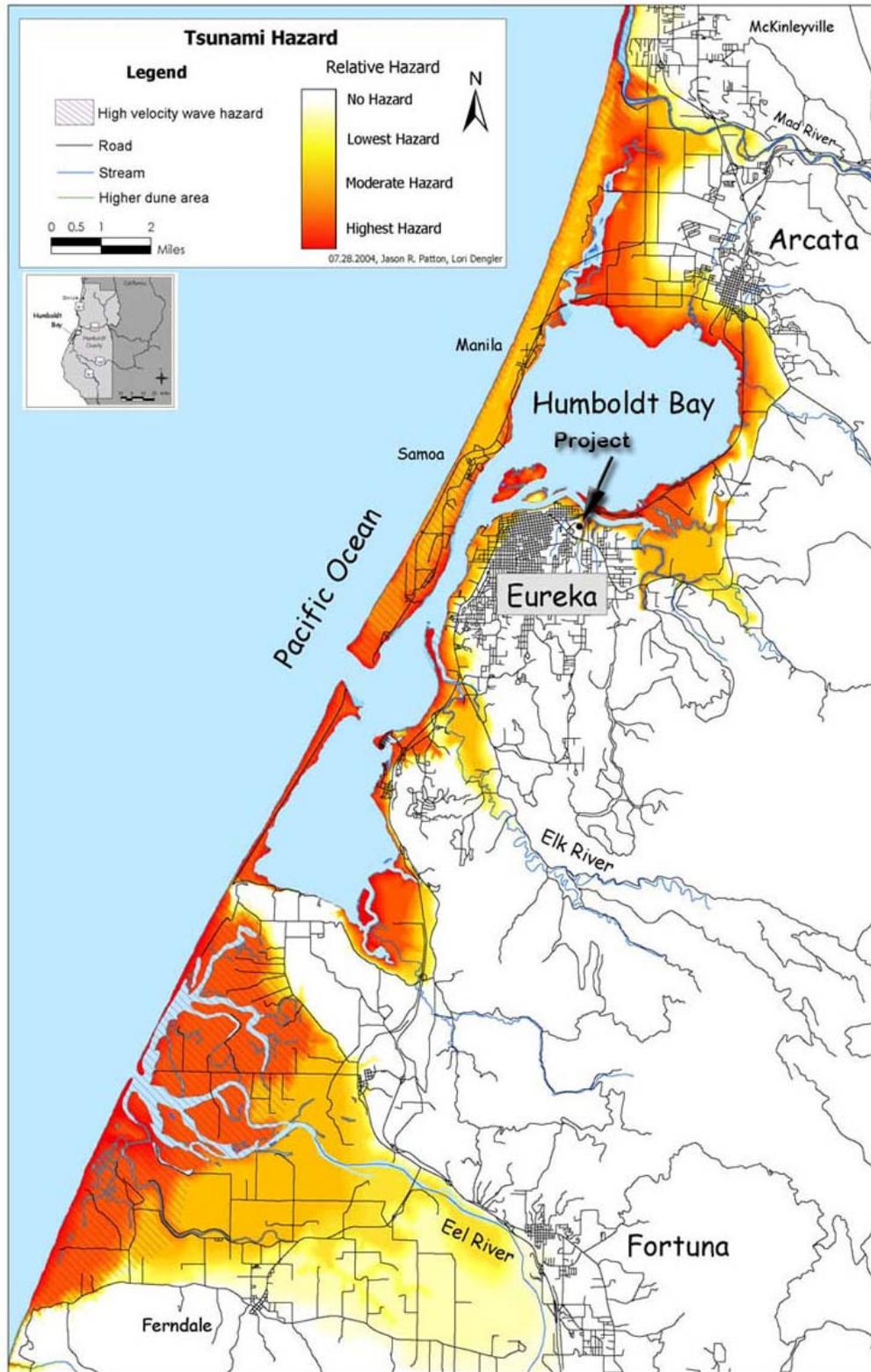


Figure 7 – Tsunami Hazards – Humboldt Bay



4.2.4 Wetlands

The proposed project site was examined for evidence of wetlands using criteria in the U.S. Army Corps of Engineers' Corps of Engineers *Wetlands Delineation Manual, Technical Report Y-87-1* (U.S. Army Corps of Engineers, Environmental Laboratory, January 1987). The site examination noted that jurisdictional wetlands are present on and adjacent to the site. The wetlands report was completed in 2004 for the lot split of the existing parcel (Winzler and Kelly 2004). The wetlands report determined that there are two types of wetlands at the project site; estuarine wetlands that are influenced by tidal conditions and saline water; and palustrine wetlands that are fed by fresh water. The report recommended that the development incorporate setbacks or buffers.

The Winzler and Kelly Report included wetland maps at the project site (See Figure 8). These wetlands are classified as coastal wetlands and include a buffer of 100 feet from the proposed development.

4.2.5 Coastal Zone

The Coastal Act of 1976 established detailed policies for land use within the Coastal Zone, and charged local governments with the responsibility to incorporate these policies into their planning and zoning regulations. Generally, the Coastal Act sets forth regulations which require the City to process Coastal Development Permits for all proposed development in the Coastal Zone. The Coastal Act, as well as the City's Local Coastal Program, provides for exemptions and exclusions for certain types of projects. The project site is totally within the coastal zone and falls under the jurisdiction of the Local Coastal Program (LCP) of the City of Eureka. Since the proposed project is located within the Coastal Zone, it will be subject to policies of the Coastal Act (California Coastal Commission and City of Eureka). As part of this environmental analysis, the General Plan and the LCP of the City were examined to identify any potential inconsistencies the proposed project may have with established land use policies, including policies pertaining to coastal resource protection. The project will require an amendment to the LCP, a Coastal Development Permit, a Coastal Grading Permit and other conditional use permits.

4.3 AIR QUALITY

The North Coast Air Basin consists of Del Norte, Trinity, Humboldt, Mendocino, and the northern half of Sonoma counties, and is under the regulatory jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD). NCUAQMD is responsible for monitoring and enforcing local and state air quality standards. Air quality standards are set for emissions that may include, but are not limited to: visible emissions, particulate matter, and fugitive dust. Pursuant to Air Quality Regulation 1, Chapter IV, Rule 400 – *General Limitations*, a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.

The North Coast Air Basin is currently in attainment (or is unclassified) of all state and federal ambient air quality standards, with the exception of the state standard for particulate matter less than ten micrometers in diameter (PM₁₀). An ambient air quality standard has recently been adopted for PM_{2.5}, and the North Coast Air Basin has not been designated.

Nearly all areas of the state are classified as non-attainment for PM₁₀. Despite the non-attainment designation for PM₁₀, air quality in the North Coast Air Basin is generally regarded as good. PM₁₀ air emissions include chemical emissions and other inhalable particulate matter with an aerodynamic diameter of less than 10 micrometers. PM₁₀ emissions include smoke from wood stoves and airborne salts and other particulate matter naturally generated by ocean surf. The greatest sources of PM₁₀ are human-caused area-wide sources, such as unpaved-road dust, residential fuel combustion, waste burning and disposal, and paved road dust. Construction and demolition contributes only a small fraction of PM₁₀ emissions. In part because of the large number of wood stoves in Humboldt County and because of the generally heavy surf and high winds common to this area, Humboldt County has exceeded the state standard for PM₁₀ air emissions. Therefore, any use or activity that generates unnecessary airborne particulate matter may be of concern to the NCUAQMD.

Pursuant to Air Quality Regulation 1, Chapter IV, Rule 430 – *Fugitive Dust Emissions*, the handling, transporting, or open storage of materials in such a manner, which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. The NCUAQMD has advised that construction projects, such as the proposed project, do not generate particulate matter greater than the local and/or state standard. The NCUAQMD has advised that, generally, an activity that individually complies with the state and local standards for air quality emissions will not result in a cumulatively considerable increase in the countywide PM₁₀ air quality violation. Proposed construction activities will result in temporary emissions from engine combustion of diesel and gasoline products and earthen dust from construction. The project involves a relatively low level of construction activity with respect to air quality, so the impacts are inherently limited to minor emission levels, and are not considered a cumulatively considerable increase in any air pollutant. Thus, these ordinary construction emissions will be less than significant and there will be no violations or attainment plan conflicts.

The Urban Emissions Model (URBEMIS) uses the ITE Trip Generation Manual and the Air Resources Board's (ARB) motor vehicle emissions model (EMFAC) for calculating air quality impacts related to project-generated transportation. Area source outputs include natural gas use, landscaping equipment, and fireplaces. URBEMIS is widely used to conduct CEQA-related air quality studies. URBEMIS was used to evaluate the construction, operations and area source emissions that are projected to result from the project. Based on the URBEMIS model, a clinic is expected to result in 5.18 vehicle trips per 1,000 square feet of space. Thus, a total of 138 trips per day are projected. Mitigation measures both in the construction and operations of the project have been included in the model such as replacing ground cover quickly; using particulate filters in heavy equipment, encouraging weekday bus usage, and others that are described in the URBEMIS report contained in Attachment A Best Management Practices (BMP's) to address air quality and global greenhouse gas reductions are described in Section 5, Environmental Consequences.

4.4 BIOLOGICAL RESOURCES

A species list was obtained from the US Fish and Wildlife Service (FWS) for the project site on November 11, 2010 (See Attachment B). The listed endangered wildlife species were the

tidewater goby, leatherback turtle, sei whale, blue whale, fin whale, and humpback whale. Proposed endangered species includes the black abalone. Endangered plant species include Menzies' wallflower, beach layia and the western lily. Threatened species include the green sturgeon, Coho salmon, northern California steelhead, California coastal Chinook salmon, loggerhead turtle, the green turtle, olive ridley sea turtle, Marbled murrelet, western snowy plover and the Northern Spotted Owl for the Eureka Quadrangle. The following is a description of the listed species and the probability of occurrence in the study area.

Table 2 – Special Status Species Occurring within the Vicinity
Federal Threatened or Endangered Species

Species	Status	Habitat	Occurrence in the Study Area
Menzies' wallflower (<i>Erysimum menziesii</i>)	Endangered	In northern California, the species occurs in northern foredune or dune mat community, on the flanks or crests of dunes, open sand areas, sparsely vegetated dunes, and the borders of lupine scrub. Common associates are beach sagewort (<i>Artemisia pycnocephala</i>), dune goldenrod (<i>Solidago spathulata</i>), coast buckwheat (<i>Eriogonum latifolium</i>), sand verbena, beach pea (<i>Lathyrus littoralis</i>) and seashore bluegrass (<i>Poa douglasii</i>).	Absent: The dune and foredune habitat, open sandy areas or other habit preferred by the Menzies' wallflower is not present at the project site.
beach layia (<i>Layia carnososa</i>)	Endangered	Sparsely vegetated semi-stabilized dunes, usually behind foredunes, near sea level to 100 ft. Endemic to beaches along the California coast (historically from Trinidad Head in the north to Pt. Arguello in the south (extant in Humboldt, Monterey, and Marin counties; extirpated in San Francisco and Santa Barbara counties).	Absent: The foredune and dune habitat favored by this species is not present at the project site.
western lily (<i>Lilium occidentale</i>)	Endangered	Pacific coastal wetlands. Mostly restricted to the edges of early successional, wet sphagnum bogs and forest or thicket openings along the margins of ephemeral ponds and small streams. Also in coastal scrub and prairie, and other poorly drained soils near the ocean where fog is common.	Unlikely: There are currently about 40-50 mostly small, widely separated populations along the coast of southern Oregon and northern California. The species is now rapidly declining, and some populations are currently non-flowering, presumably due to environmental stresses. It is known or assumed to be extirpated from at least 9 historical sites due to coastal development, fire suppression and associated forest succession
black abalone (<i>Haliotis cracherodii</i>)	Proposed Endangered	The species occurs from the high intertidal to 6 m depth, and has evolved to withstand extreme variation in environmental conditions such as temperature, salinity, moisture, and wave action. It occurs on a variety of rock types and complex surfaces with cracks and crevices are crucial to recruitment	Absent: The proposed site is not within intertidal areas.
green sturgeon (<i>Acipenser medirostris</i>)	Threatened	Wide-ranging migrant, but only 3 known spawning rivers (Klamath River, California; Sacramento River system, California; Rogue River, Oregon (Moyle et al. 1995).	Absent: The project area is not within any of the known spawning rivers.
tidewater goby (<i>Eucyclogobius newberryi</i>)	Endangered	Historically widespread in brackish coastal lagoons and coastal creeks in California from the mouth of the Smith River, Del Norte County, south to Agua Hedionda Lagoon, San Diego County (Lee et al. 1980, USFWS 1999).	Absent: Naturally absent (due to lack of suitable habitat) between Humboldt Bay and Ten Mile River, between Point Arena and Salmon Creek, and between Monterey Bay and Arroyo del Oso.

Species	Status	Habitat	Occurrence in the Study Area
S. OR/N. CA Coho salmon (<i>Oncorhynchus kisutch</i>)	Threatened	All coho salmon stocks between Punta Gorda and Cape Blanco are depressed relative to past abundance. The main stocks in this region (Rogue River, Klamath River, and Trinity River) are heavily influenced by hatcheries and, apparently, have little natural production in mainstem rivers.	Likely: The Eureka Slough and upper portions of Freshwater and Ryan Sloughs include habitat for coho (DFG 2003)
Northern California steelhead (<i>Oncorhynchus mykiss</i>)	Threatened	The ESU includes all naturally spawned populations of steelhead (and their progeny) in coastal river basins from Redwood Creek in Humboldt County to the Gualala River, California, inclusive. Migrates between freshwater breeding and marine nonbreeding habitats (as defined by NMFS 1996, this entity does not include nonanadromous forms). Includes both winter and summer steelhead, including what is presently considered to be the southernmost population of summer steelhead, in the Middle Fork Eel River; "half-pounder" juveniles also occur; some of the larger rivers in the range have migrating steelhead year-round, and seasonal runs have been named; river entry ranges from August through June (NMFS 1996).	Likely: The Eureka Slough and upper portions of Freshwater and Ryan Sloughs include habitat for the steelhead (DFG 2009).
CA coastal Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	Threatened	Range includes marine waters off Oregon and California and spawning streams from Euchre Creek, Oregon, to the lower Klamath River, California; trends in abundance are mixed but generally increasing; impacts of hatchery fishes and declines in spring runs are of concern; recent evaluation by NMFS concluded that this ESU is not threatened with extinction and is not likely to become so in the foreseeable future.	Likely: The Eureka Slough and upper portions of Freshwater and Ryan Sloughs include habitat for the Chinook (DFG 2009).
loggerhead turtle (<i>Caretta caretta</i>)	Threatened	Warmer parts of Atlantic, Pacific, and Indian oceans, and Mediterranean (Bolten et al. 1992) and Caribbean seas. Ranges into temperate zones in summer. Rare or absent far from mainland shores.	Absent: The project does not include habitat needed for this species.
green turtle (<i>Chelonia mydas</i> (incl. <i>agassizi</i>)	Threatened	Distribution is pantropical in the Atlantic, Pacific, and Indian oceans. In some areas this species occurs in higher temperate latitudes due to drifting in ocean currents in conjunction with above-normal sea temperatures or as a normal life history event; young turtles regularly range as far north as New England. Feeding occurs in shallow, low-energy waters with abundant submerged vegetation, and also in convergence zones in the open ocean	Absent: The project does not include habitat needed for this species.
leatherback turtle (<i>Dermochelys coriacea</i>)	Endangered	Oceanic distribution is nearly worldwide, but the number of nesting sites is few; many nesting areas have few breeding females and suffer from some human predation; range and number of occurrences have undergone reduction; recent severe population declines at some nesting locations. Specific areas proposed for designation include two adjacent marine areas totaling approximately 46,100 square miles (119,400 square	Absent: The project does not include habitat needed for this species.

Species	Status	Habitat	Occurrence in the Study Area
		km) stretching along the California coast from Point Arena to Point Vicente.	
olive ridley sea turtle (<i>Lepidochelys olivacea</i>)	Threatened	Wide range in the tropical and subtropical Pacific, Indian, and Atlantic oceans; population much smaller than historical level; current trend varies among regions; many populations are declining as a result of incidental take by shrimpers, disturbance and development of nesting beaches, exploitation for meat, leather, and eggs, and other factors.	Absent: The project does not include habitat needed for this species.
marbled murrelet (<i>Brachyramphus marmoratus</i>)	Threatened	Extensive range along the Pacific coast of North America from Alaska to California; population numbers still high in British Columbia and Alaska, but declining; threats from habitat loss due to logging, oil spills, and gill net fisheries are increasing. On the southern coast of Washington, north coast of Oregon, and in California south of Humboldt County, murrelets are rare or uncommon where they once were common or abundant in the early 1900s (Ralph et al. 1995). Most populations are dependent on large trees in old-growth forests for nest sites. Continued harvest of old-growth and mature coastal coniferous forest that reduces critical nesting habitat is a major concern throughout most of the range	Absent: of old-growth and mature coastal coniferous forest necessary for critical nesting habitat is not present at the project site.
western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	Threatened	Nests on the ground on broad open beaches or salt or dry mud flats, where vegetation is sparse or absent (small clumps of vegetation are used for cover by chicks); nests beside or under object or in open (Page et al. 1985). Nests often are subject to flooding.	Absent: Broad open beaches or salt or dry mud flats are not present on the project site.
Western yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Candidate	Western yellow-billed cuckoo formerly was widespread and locally common in California. Riparian forests have declined throughout the west as a result of conversion to agricultural and other uses, dams and river flow management, stream channelization and stabilization, livestock grazing, groundwater pumping, and invasion of alien vegetation. Habitat fragmentation is a major threat; in California, nesting by yellow-billed cuckoos may require intact woodlands of at least 40 hectares, and woodlands greater than 80 hectares appear to be preferred (Laymon and Halterman 1989).	Absent: Un-fragmented woodlands are not present at the project site.
short-tailed albatross (<i>Phoebastria albatrus</i>)	Endangered	Ranges widely in the North Pacific, but hunted to near-extinction in early 1900s. Species is now found in a few isolated islands in the Pacific but NMFS has determined that off-shore fishing gear and plastic pollution might impact this species.	Absent: Habitat for this species is not available at the project site.
Northern Spotted Owl (<i>Strix occidentalis caurina</i>)	Threatened	Heavily forested areas in the coastal ranges of northern California from Marin Co. north, and in the Sierra Nevada from Plumas Co. to extreme northern Kern Co.	Unlikely, no suitable habitat at project site; not likely to occur in highly urbanized areas.
Xantus's murrelet (<i>Synthliboramphus hypoleucus</i>)	Candidate	Most of the population breeds on only four islands off southern California and Baja California. This murrelet nests on rocky offshore islands. It	Unlikely, no suitable habitat at project site; not likely to occur in highly urbanized areas.

Species	Status	Habitat	Occurrence in the Study Area
		nests on the ground, in rock crevices, under dense bushes or boulders, or in caves, usually on a cliff or steep slope, in secluded dark areas where the eggs generally are not visible from the cavity entrance, sometimes under vegetation on sandy slopes facing the sea.	
sei whale, blue whale, fin whale, humpback whale, and sperm whale	Endangered or Threatened	Ocean.	Absent: Habitat for this species is not available at the project site.
Steller northern sea-lion (<i>Eumetopias jubatus</i>)	Threatened	The most commonly used terrestrial habitat types are rookeries and haulouts. Rookeries are areas where adults congregate for breeding and pupping. These habitats generally occur on beaches of remote islands with difficult access for humans and other mammalian predators. The beaches can be sand, gravel, cobble, boulder, or bedrock.	Absent: Habitat for this species is not available at the project site.
OCURRENCE DESIGNATIONS: Present: Species observed on the study area at time of field surveys or during recent past. Likely: Species not observed on the study area, but it may reasonably be expected to occur there on a regular basis. Possible: Species not observed on the study area, but it could occur there from time to time. Unlikely: Species not observed on the study area, and would not be expected to occur there except, perhaps, as a transient Absent: Species not observed on the study area, and precluded from occurring there because habitat requirements not met.			

4.4.1 Fishery

The native anadromous salmonid species of interest in the Eureka Slough and the tributaries of the Freshwater and Ryan Sloughs are Chinook salmon (*Oncorhynchus tshawytscha*), Coho salmon (*Oncorhynchus kisutch*), and steelhead (*Oncorhynchus mykiss irideus*). Recent studies performed by the DFG Natural Stocks Assessment Project (Wallace 2006) have shown that juvenile salmonid use Freshwater Creek Slough as rearing habitat, in particular young-of-the-year (yoy) coho salmon, and to a lesser extent, juvenile steelhead and cutthroat trout, as well as numerous other marine fish and invertebrates. While residence time may vary between the sloughs, years, and species, yoy coho salmon used Freshwater Creek Slough extensively, and yoy coho salmon residing in the upper slough were larger than their cohorts residing upstream in Freshwater Creek. The buildable area of the project is setback from the surface waters, therefore, the fishery likely to be present are adequately buffered from potential impact.

4.4.2 Wildlife

Many North American species have successfully adapted to, and are thriving in the Eureka urban environment. Typical examples include coyotes (*Canis latrans*), raccoons (*Procyon lotor*), squirrels (*Sciuridae spp.*), opossums (*Didelphimorphia ssp.*), mule deer (*Odocoileus hemionus*) red foxes (*Vulpes vulpes*) and a wide assortment of avian species.

4.4.3 Vegetation

Vegetation at the site comprises of common clovers (*Trifolium sp.*), velvet grass (*Holcus lanatus*), annual bluegrass (*Poa annua sp*), annual ryegrass (*Lolium multiflorum*), red brome (*Bromus rubens*), meadow fescue (*Festuca pratensis*), tufted hairgrass (*Deschampsia cespitosa*), gum plant (*Grindelia robusta*), salt grass (*Distichlis spicata*), Himalayan blackberry (*Rubus discolor*), lady fern (*Athyrium felix-femina*), brass buttons (*Leptinella squalida*), common rush (*Juncus effuses*), reed canary grass (*Phalaris arundinacea*), small seeded bulrush (*Scirpus microcarpus*), curly dock (*Rumex crispus*), pickleweed (*Salicornia virginica*) and an assortment

of sedges. Most of the vegetation at the project site are non-native species and are indicative of grazing and other human-related activities.

4.4.4 Sensitive Habitats

The project site is within the urban core of the City of Eureka. A species list was obtained from the Arcata Field Office of the USFWS on November 11, 2010. None of the species listed are known to occur at the project site. The project will not affect any state or federally listed or proposed Threatened or Endangered Species, or any designated or proposed critical habitat.

4.5 CULTURAL RESOURCES

As a federal action, the proposed undertaking must comply with NEPA and Section 106 (Codified as 36 CFR Part 800) of the National Historic Preservation Act, and must consider effects to historic properties.

The proposed project is NOT expected to affect any properties within a historic district or any properties on the National Register of Historic Places. A letter to the State Historic Preservation Officer (SHPO) was sent on November 23, 2010 to enquire about the presence of historic places and resources within the vicinity of the proposed project (See Attachment C).

Based on the SHPO's response dated December 10, 2010, the SHPO writes "Having reviewed the submitted documentation, I have the following comments:

- 1) I concur that the Area of Potential Effects (APE) has been properly determined and documented pursuant to 36 CFR Parts 800.4 (a) (1) and 800.16 (d).
- 2) I further concur that the finding of No Historic Properties Affected is appropriate pursuant to 36 CFR Part 800.4(d) (1) and that the documentation supporting this finding has been provided pursuant to 36 CFR Part 800.11(d).
- 3) In conversation between you and Tristan Tozer of my staff, it has come to my attention that members of the Wiyot Tribe have expressed an interest in monitoring construction activities. I believe this is a reasonable request and recommend that you allow cultural monitors to observe all ground disturbing aspects of the project.
- 4) Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have additional future responsibilities for this undertaking under 36 CFR Part 800.

A copy of the SHPO response letter is also included in Attachment C.

4.5.1 Ethnography and History in Eureka

The study area lies within the traditional territory of the Wiki division of the Wiyot Indian tribe. This group occupied lands adjacent to Humboldt Bay, while other divisions of the tribe inhabited areas to the north and south. The Wiyot language has been categorized as Algonquian-based. In it, the Wiyots called themselves the Soo-lah-te-luk. The name "Wiyot" itself is derived from the Yurok term "weyet or "weyot". The Yuroks, who lived to the north, also spoke a language classified as Algonquian. Although the Wiyot and Yurok languages are distinctly different, linguists have linked the two in "a provisional group called Ritwan" that is alternatively classified as Algic. Linguistic research implies that the two groups are distantly related.

According to Humboldt State University linguist Victor Golla, the Wiyots arrived in the Humboldt Bay area approximately 2,000 years ago, inhabiting a lagoon environment that afforded the use of coastal resources. The Yuroks then came "at a much later date," sometime subsequent to the arrival of the first Athabascan speakers, who appeared after 600 CE (Common Era) (Golla

2003). The earliest establishment in the Wiyot's region was approximately 900 CE, based on carbon-14 dating (Elsasser 1978:155).

The Wiyots lived in villages that were uniformly close to water, for they were people of the wetlands, where their sustenance often came from bay or river, and where their way could often most easily be made by canoe rather than on foot. Although the Wiyots were as 'coastal' in residence as a people could be, they used the ocean very little for either subsistence or travel (Nomland and Kroeber 1936:45). On the other hand, "[e]very bay settlement was on tidewater" (Nomland and Kroeber 1936:45). The Wiki, or central division, occupied the Humboldt Bay shoreline, islands and probably occupied the project site.

Caucasians began to have a substantial impact on the bay in the spring of 1850, when numerous fortune-seekers arrived there and promptly established four bayside communities: Humboldt City (on the site of today's King Salmon), Bucksport (in the area south of today's Bayshore Mall), Eureka, and Union (later called Arcata).

In the latter year there occurred a series of events that embodied the transition from the earlier Indian culture to that of the newcomers: in late February 1860, Caucasians attacked several Indian villages on Humboldt Bay and the lower Eel River, massacring the inhabitants and destroying the dwellings. These were not the first such atrocities committed in the county, nor were they the last, but they were the most public and most publicized, and the local response to them indicated the attitude of the white community.

While there were many letters condemning the acts, the County grand jury failed to charge anyone with the crimes. Many of the surviving Wiyot Indians were collected by the military and eventually sent to the Klamath Reservation, many miles to the north. A decade of murder and intimidation had caused the death or removal of most of the Indians who had once inhabited the area around Humboldt Bay.

4.6 SOCIOECONOMIC CONDITIONS

Census data for Humboldt County indicates a small projected population growth for the County as a whole, with about a 2.5% population increase estimated to have occurred between 2000 and 2009. Census 2010 data indicates that Humboldt County had a population of 129,623, with 19.8% or about 25,665 residents of the County being below the poverty level. The following figure outlines the general demographics of Humboldt County, California.

Table 3 – General Demographics of Humboldt County

Subject	Humboldt County
Population, 2009 estimate	129,623
Population, percent change, April 1, 2000 to July 1, 2009	2.5%
Population estimates base (April 1) 2000	126,518
Persons under 5 years old, percent, 2009	6.1%
Persons under 18 years old, percent, 2009	20.2%
Persons 65 years old and over, percent, 2009	13.0%
Female persons, percent, 2009	50.4%
White persons, percent, 2009 (a)	85.7%
Black persons, percent, 2009 (a)	1.2%
American Indian and Alaska Native persons, percent, 2009 (a)	6.5%
Asian persons, percent, 2009 (a)	2.1%

Subject	Humboldt County
Native Hawaiian and Other Pacific Islander, percent, 2009 (a)	0.3%
Persons reporting two or more races, percent, 2009	4.2%
Persons of Hispanic or Latino origin, percent, 2009 (b)	8.9%
White persons not Hispanic, percent, 2009	78.3%
Housing units, 2009	59,460
Homeownership rate, 2000	57.6%
Households, 2000	51,238
Persons per household, 2000	2.39
Median household income, 2008	\$39,627
Per capita money income, 1999	\$17,203
Persons below poverty level, percent, 2008	19.8%

4.6.1 City of Eureka Demographics

The following table outlines the Census data for the residents of the City of Eureka, California.

Table 4 – General Demographics of the City of Eureka

Subject	Eureka
Population, 2006 estimate	25,435
Population, percent change, April 1, 2000 to July 1, 2006	-2.6%
Population, 2000	26,128
Persons under 5 years old, percent, 2000	5.7%
Persons under 18 years old, percent, 2000	22.4%
Persons 65 years old and over, percent, 2000	13.7%
Female persons, percent, 2000	50.5%
White persons, percent, 2000	82.5%
Black persons, percent, 2000	1.6%
American Indian and Alaska Native persons, percent, 2000	4.2%
Asian persons, percent, 2000	3.6%
Native Hawaiian and Other Pacific Islander, percent, 200	0.3%
Persons reporting two or more races, percent, 2000	5.1%
Persons of Hispanic or Latino origin, percent, 2000	7.8%
Living in same house in 1995 and 2000, pct 5 yrs old & over	43.5%
Housing units, 2000	11,637
Homeownership rate, 2000	46.5%
Median value of owner-occupied housing units, 2000	\$114,000
Households, 2000	10,957
Persons per household, 2000	2.26
Median household income, 1999	\$25,849
Per capita money income, 1999	\$16,174
Persons below poverty, percent, 1999	23.7%

As illustrated in Table 4 above, 23.7% of the total numbers of residents live below the federal poverty level in Eureka as compared to 19.8% for the County.

4.6.2 ODCHC Demographic Data

In 2008, ODCHC served 39,514 unique users – one in every four residents of its service area – providing 167,000 encounters for primary medical, dental, and mental health and enabling services. Among ODCHC users, 30% are uninsured, 50% rely on public insurance, 60% live below 100% and 88% live below 200% of the federal poverty level. Due to a lack of private practitioners, ODCHC accepts commercially insured users into all clinics. Many residents have recently lost public and private health insurance.

Eureka, CA, the most populous area in the two counties served by ODCHC, has the smallest facilities. Over 46,000 of the 167,000 service area residents live in Eureka zip codes. In 2008, ODCHC served 39,514 users, including 12,000 Eureka residents.

The average age of a primary care provider is over 55. Health indicators available for Humboldt County show significant health disparities in the population. Humboldt County performs poorly when comparing death rates; indeed, in comparing 10 of 13 causes of death, Humboldt County is in the bottom 25% of all counties in California. At the same time, ODCHC patients buck these trends. For example, when comparing diabetes, residents have a higher than average death rate but over 80% of ODCHC patients have well-controlled diabetes. Among the 9,700 users of ECHC and TVSC in 2008 (only 4,500 from Eureka), 93% live below 200% of the federal poverty level, 28% are uninsured and 57% rely of public insurance. More than half are diagnosed with disabling and/or chronic conditions.

4.6.3 Attitudes, Expectations, Lifestyle, and Cultural Values

In so far as expectations are concerned, residents and the Eureka City government are very supportive of the proposed project as a method of expanding the medical services of the ODCHC and the development of much needed medical services. Due to the increased size of the clinic, the facility may be better able to handle patients and offer more efficient and modern treatment.

4.7 COMMUNITY INFRASTRUCTURE

4.7.1 Fire Protection

The Eureka Fire Department (EFD) Station #4 is located on 1016 Myrtle Avenue and is located approximately .23 miles from the project site. The Eureka Fire Department is a paid fire department consisting of a Chief, two Assistant Chiefs, two fire prevention officers, 36 firemen and 12 trained volunteers. The Eureka Fire Department conducts annual inspections of every business within the city limits. During the inspection, usually conducted by a three person engine company, the personnel are checking for fire hazards, proper exiting, and damage to buildings that may propagate fire travel.

4.7.2 Law Enforcement

The Eureka Police Department provides law enforcement to all areas of Eureka, including the neighborhood near the proposed medical facility. The Eureka Police Department building is at 6th and C Streets and response time to the proposed facility is approximately 3 to 5 minutes. The Eureka Police Department serves the community with 52 Sworn Officers and 40 professional staff civilian employees.

Along with the Eureka Police Department, the California Highway Patrol provides law enforcement within the project area. The California Highway Patrol (CHP) has an office at 1656 Union Street.

4.7.3 Schools

The project area is located within the vicinity of the Humboldt County Office of Education. Schools in the vicinity include Zane Middle School, Lafayette Elementary, and Eureka High School. All of these facilities are located within one mile of the project site. The proposed project is not expected to impact any of the local schools.

4.7.4 Solid Waste Disposal

Solid waste disposal services for the project area are provided by the Humboldt Waste Management Authority (HWMA). The proposed medical facility will be served by the HWMA's curbside garbage pickup program. The ODCHC also has a medical waste management plan and medical waste will be picked up weekly by a registered medical waste hauler for transport to an approved State incineration facility.

4.7.5 Gas & Electric Services

Gas and Electric Service is currently provided to the project site by PG&E. No extension of power poles are necessary as part of the proposed project however gas service may require additional lead time to extend.

4.7.6 Communications Service

Telephone service for Eureka is provided by AT&T. All communication services including internet access are available at the site.

4.7.7 Water Service

Water and sewer service is provided by the City of Eureka. The City has not identified any capacity concerns; however there are potential pressure issues for fire flows that will need to be addressed during final design of the facility. However, the domestic water service will need to be extended to the project site.

4.7.8 Sanitary Sewer Services

Sanitary sewer service is provided by the City of Eureka. The City has not identified any capacity concerns, but service will need to be extended.

4.8 RESOURCE USE PATTERNS

Subsistence utilization of resources through hunting, fishing, and gathering occurs at low levels within the vicinity of the project area due to the developed nature of the City of Eureka. Such activities are not anticipated to be significantly impacted by the proposed project.

4.8.1 Timber

There are no merchantable timber resources in the proposed project area.

4.8.2 Agriculture

Commercial agriculture is not a current land use activity within the study area. No activities proposed under this project are anticipated to cause significant impact to agricultural resources in surrounding areas.

4.8.3 Mining

Commercial mining is not a current land use activity within the study area. There are no known mineral or energy resources of local, regional, or national importance on the proposed project site according to the California Geological Survey.

4.8.4 Recreation

The proposed action is not expected to significantly impact the recreational character of the area.

4.8.5 Transportation Network

The transportation network that will serve the proposed project generally consists of six key intersections; 1) 4th Street and V Street, 2) 5th Street and V Street, 3) 6th Street and West Avenue, 4) Tydd Street and West Avenue, 5) Searles Street and West Avenue, and 6) Myrtle Avenue and West Avenue. The project can only be accessed through Tydd Street.

Sidewalks are continuous throughout the entire project study area, and often occur on both sides of the roadways. Sidewalks will need to be extended to and within site and some street improvements will need to be constructed. In addition to the sidewalks, crosswalks are available at every study intersection. The intersection of Tydd Street and West Avenue has been enhanced by a pedestrian crosswalk signal, which illuminates overhead and pavement-mounted flashing lights when a pedestrian uses the push button located on the signal pole before crossing West Avenue. West Avenue and Myrtle Avenue in the vicinity of the project area are designated Class III bike routes (Eureka General Plan).

Pedestrian and bicycle traffic appeared to be fairly heavy during the field observations/traffic counts in November and December 2010. The combined pedestrian and bicycle flow rates range from 5 to 20 persons per hour for each intersection, accounting for approximately 5% of the total project area traffic. Tydd Street and West Avenue had the highest number of observed pedestrians, likely due to the high density multi-family and adult assisted living facilities present in this area. Based on the high number of observed bicyclists along West Avenue, the roadway width appears to be adequate enough to safely handle bicyclists.

Accident/collision information within the vicinity of the study area was obtained from the City of Eureka Police Department. Collision data along V Street/West Avenue between the intersections of West and 4th Street and West and Myrtle Avenue from January 1, 2008 through December 1, 2010 have been compiled. The accident logs illustrate that there were 19 traffic collisions near the project area within this time frame. Four of the incidents were caused by unsafe speed, two are contributed to an unsafe lane change, improper turning/hazardous movements caused four of the accidents, while the remaining collisions were caused by a variety of factors including unsafe starting or backing, improper driving, pedestrian violation, and traffic signal/signage violations. None of the incidents were attributed to poor sight distance or other factors beyond the driver's control. Of the 19 collisions within the specified timeframe in the project vicinity, nine resulted in injuries. Three accidents, all involving injuries, took place at the intersection of Tydd Street and West Avenue. There were no fatalities involved in any of the collisions.

Traffic operations at the intersections listed above have been quantified through the determination of Level of Service (LOS). LOS is a qualitative measure of traffic operating conditions, whereby a letter grade of A through F is assigned to an intersection or roadway segment. LOS A represents stable flow traffic conditions. Progression is very favorable, turning movements are easily made, and nearly all drivers find freedom of operation in LOS A conditions. In contrast, LOS F represents jammed conditions and backups from other locations that restrict or prevent movement and free traffic operations. LOS is calculated for different control types using the methods documented in the 2000 Highway Capacity Manual.

Average daily peak hour traffic data for all six intersections were collected by LACO Associates between November 30th, 2010, and December 14th, 2010. The peak hour traffic data collection consisted of manual traffic counts taken on Tuesdays, Wednesday, and Thursdays during the peak AM and PM traffic periods. In order to capture the likely peak hour traffic volume, counts were taken at all the intersections between 7:00 AM to 9:00 AM and again from 4:00 pm to 6:00 pm. Information on the number of pedestrians, bicyclists, and buses/heavy trucks was also collected during these timeframes for each intersection.

The existing peak-hour intersection traffic operations were quantified by applying the existing traffic volumes and intersection lane geometry and control systems. Table 5 presents the existing peak hour intersection LOS for the six study intersections. As indicated in Table 5, all study intersections are currently operating at LOS D or better during the PM peak hour except for the 6th and West Avenue intersection.

Table 5 – Existing Intersection Level of Service

Intersection	Existing Control Type	Delay (Seconds per vehicle)	LOS	Signal Warrant Met?
4 th St. and V St.	Three-way Signalized Control	14.8	B	N/A
5 th St. and V St.	Three-way Signalized Control	71.4	E	N/A
6 th St. and West Ave.	Four-way intersection with unsignalized stop control	68.6	F	N/A
Tydd St. and West Ave.	Three-way intersection with unsignalized stop control	16.9	C	No
Searles St. and West Ave.	Three-way intersection with unsignalized stop control	16.9	C	
Myrtle Ave. and West Ave.	Four-way intersection with signalized traffic control	46.9	D	N/A
<i>Source: LACO Associates, 2010</i>				

The City of Eureka General Plan has designated a Level of Service C operation on all roadway segments, except for any portion of U.S. 101, where Level of Service D shall be acceptable as the minimum standard on road facilities in general. In the Traffic Impact Study for the proposed project, a peak-hour LOS C was used as the threshold for acceptable traffic operations at all study intersections and roadways. Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002) indicated that when the LOS of a State highway facility falls below the LOS C/D cusp in rural areas and the LOS D/E cusp in urban areas, any additional traffic may have a significant impact. When existing State highway facilities are operating at higher LOS's than those noted above, 20-year forecasts or general plan buildout analysis for the project should be considered to establish equitable project contributions to local development impact fee programs that address cumulative impacts.

Existing AM and PM peak hour delay and turning movement LOS for the study intersections are shown in Tables 6 and 7 which follows.

Table 6 – LOS Summary for Existing AM Traffic Conditions

Study Intersection	Northbound		Southbound		Eastbound		Westbound		Intersection	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
4 th St. and V St.	23.3	C	15.5	B	-	-	9.5	A	14.2	B
5 th St. and V St.	18.4	B	14.7	B	23	C	-	-	19.7	B
6 th St. and West Ave.	8.5	A	8.7	A	28.4	D	28.9	D	-	-
Tydd St. and West Ave.	-	-	14.7	B	9.3	A	-	-	-	-
Searles St. and West Ave.	-	-	14.7	B	9.4	A	-	-	-	-
Myrtle Ave. and West Ave.	42.9	D	22.2	C	17.1	B	23.7	C	28.5	C

Table 7 – LOS Summary for Existing PM Traffic Conditions

Study Intersection	Northbound		Southbound		Eastbound		Westbound		Intersection	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
4 th St. and V St.	25.1	C	18	B	-	-	8.7	A	14.8	B
5 th St. and V St.	15.9	B	15.7	B	103.3	F	-	-	71.4	E
6 th St. and West Ave.	8.4	A	8.9	A	107.8	F	29.5	D	-	-
Tydd St. and West Ave.	-	-	16.9	C	8.7	A	-	-	-	-
Searles St. and West Ave.	-	-	16.9	C	8.9	A	-	-	-	-
Myrtle Ave. and West Ave.	36.7	D	95.4	F	17.6	B	34.5	C	46.9	D

Notes: Delay is in average number of seconds per vehicle
LOS = Level of Service

Vehicle trips generated by the proposed project were calculated using *Trip Generation*, 7th Edition, issued by the Institute of Transportation Engineers (ITE), 2003. A vehicle trip is defined as a single, one-directional vehicle movement where either the origin or the destination is inside of the project area. A standard reference used by jurisdictions throughout the state, the *Trip Generation* manual is based on actual trip generation studies performed at numerous locations in areas of varied population. It was assumed that the Open Door Community Health Center project was best represented by the Clinic ITE land use category (ITE LU # 630).

Table 8 – Trip Generation Summary for the Open Door Community Health Center

Land Use	Floor Area (sq. ft.)	Project Peak Hour Trips	Weekday			Weekday		
			AM Peak Hour			PM Peak Hour		
			Trips	In	Out	Trips	In	Out
Clinic	26,000	135	94*	47	47	94*	47	47

* Assuming 30% of the patrons/staff will use public transportation

The trip distribution characteristics for the Tydd Street and West Avenue intersection were based on existing travel patterns. It is assumed that the majority of the traffic generated from the proposed use of the project will follow the existing traffic patterns in place. Based on the travel patterns at the existing ODCHC at Buhne Street in Eureka it is reported that 30 percent of the patrons/staff use public transport to get to the clinic. It is anticipated that most of the clients at

the new facility will use public transport to get to the proposed clinic. Therefore, the total number of trips expected to be produced by the proposed project is 30 percent less than that presented in the *Trip Generation* manual.

Tydd Street is currently the only ingress/egress point to the proposed Open Door Community Health Center site. Based on the existing traffic flow patterns in place at the six study intersections, it is anticipated that most of the traffic entering the Health Center would be traveling on westbound West Avenue and would make a right turn from West Avenue onto Tydd Street. Traffic leaving the Health Clinic would most likely turn left onto West Avenue from Tydd Street and proceed to Myrtle Avenue.

The Level of Service analysis for the project indicates that most of the traffic movements at the Tydd Street and West Avenue intersection will remain at the same LOS with the existing-plus-project traffic volumes. The increase in delay due to the project can be mitigated by a new lane configuration on Tydd Street and other BMP's as described in Section 5, Environmental Consequences.

4.9 LAND USE PATTERNS

Land surrounding the project site is developed with general commercial buildings such as Redwood Harley Davidson, the Humboldt County Department of Child Support, CVS Pharmacy and the State Compensation Insurance offices. The Shoreline RV Park is within 500 feet of the site as well as the Salvation Army's Silvercrest Senior Residence, a 150 unit apartment complex.

The subject property is within a High Density Residential (HDR) and Natural Resources (NR) General Plan land use designation. The City of Eureka has zoned the subject property RM-1000 (Multi-Family Residential) and NR (Natural Resources).

The proposed project may require both a General Plan Amendment and a Zone Reclassification from the City of Eureka. A General Plan Amendment to change the General Plan land use designation from HDR to GSC (General Services Commercial); and NR to CS (Commercial Service) might be needed. Additionally, a Zone Reclassification to change the zoning from RM-1000 to CS (Service Commercial); and NR to CS (Service Commercial) could be necessary.

However, to speed up the re-zoning process, the City of Eureka Community Development Department has indicated the City will consider ODCHC as a charitable institution. The Tydd Street site has two zones, commercial and residential, and a charitable institution is conditionally permitted in both. Otherwise, the zoning would need to be changed for the medical facility to be built, which would take extra time.

4.10 OTHER VALUES

4.10.1 Wilderness

The proposed project site is not located in a designated wilderness area.

4.10.2 Sound and Noise

The proposed project will not generate a sustained increased level in noise. During the construction phase of the project, heavy equipment and large trucks may produce noise levels in excess of what is currently heard, but the construction activities and the associated noise will be short-term and are not expected to create significant noise impacts.

4.10.3 Public Health and Safety

Geotracker and Environmental Data Resources (EDR), two databases of hazardous waste sites, were reviewed for the general project area (within 500 feet) and included only one site. That site is known as City of Eureka Hill Street Sewage Plant (2264 Tydd Street) and included potential contaminants of concern (petrochemicals and diesel). However, the site is listed a completed-case closed as of September 9, 2000.

Based on a combination of field reconnaissance and database research, no mapped sites were found in the search of reasonably ascertainable government records either on the target properties or within the ASTM E 1527-05 search radius, nor does the subject property exhibit any characteristics that indicate the presence of contamination on site or contamination impacts to properties within ½ mile of the site.

4.10.4 Aesthetics

The aesthetics of the project area will not be significantly affected by the development of the proposed project. The facility construction will be designed to meet the requirements of the Design Review process of the City of Eureka. The surrounding neighborhood is developed with professional offices, general commercial buildings, senior apartments, and an RV Park, making the view of the medical clinic consistent with its surroundings.

5.0 ENVIRONMENTAL CONSEQUENCES

This section of the Environmental Assessment analyzes the effects of the proposed project.

5.1 INTRODUCTION

For the purposes of this analysis, both direct and indirect impacts were reviewed. Direct impacts are those that are caused by the proposed action and occur at the same time and place (i.e. the construction activities attributed to the project). Indirect effects, which are caused by the action and are later in time or farther removed in distance, are still reasonably foreseeable (i.e. development of the area at a higher density). Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

5.2 LAND RESOURCES

The direct effects of the proposed action will not have significant impacts to topography, soil types & characteristics, geologic setting and mineral resources as the soil disturbance is calculated at 52,270 square feet (1.2 acres). The indirect effect of construction of the building will not impact land resources.

5.2.1 Soil Types and Characteristics

The construction of the proposed project would remove native vegetation and grasses and vegetation and involve grading and earth moving activities. This would increase the potential for erosion impacts. Therefore, implementation of the best management practices (BMP) would be required.

BMP 1: An erosion and sedimentation control plan for the proposed project shall be prepared by a qualified civil or geotechnical engineer and implemented during the construction of the proposed project. The erosion and sedimentation control plan shall include best management practices to reduce potential erosion and sedimentation impacts.

With the implementation of the above BMP, impacts related to erosion would be reduced to less than significant levels during the construction of the project. After construction of the proposed project, native soils would be covered by landscaping and vegetation or by impervious surfaces, such as buildings, concrete or asphalt. This would stabilize soils and reduce the potential for erosion.

5.2.2 Seismic Hazards

The proposed area would be subject to ground shaking if a seismic hazard were to occur. Compliance with the California Building Code and standard engineering design techniques would help to reduce potential impacts related to ground shaking. These site conditions would increase the potential for geotechnical hazards. Therefore, BMP's would be required.

BMP 2: Prior to construction, a final geotechnical investigation shall be prepared for the proposed project. The design of the project shall incorporate the engineering recommendations from the geotechnical investigation. Recommendations may include (but are not limited to) the export of unstable soils, the use of engineering fill, foundation

and retaining wall design requirements, and other related engineering design measures to lessen potential geotechnical hazards at the site.

With the implementation of the above BMP, impacts would be considered less than significant.

5.2.3 Mineral Resources

There are no known mineral or energy resources of local, regional, or national importance on the proposed project site. Therefore, no impacts to mineral or energy resources would occur as a result of the proposed project.

No Action Alternative

Under the No Action Alternative, the proposed property would remain in its current status. Existing environmental conditions on the site would remain unchanged.

5.3 WATER RESOURCES

The direct effects of the proposed action will not have an impact on water resources or water quality.

The indirect effects on water quality due to urbanization are typical of those for any community development. In general, urbanization has a direct impact on water resources and water quality. Urbanization introduces impervious surfaces to the landscape, including concrete, asphalt, and other building materials. This reduces the amount of pervious surfaces, which are vital for groundwater percolation and the recharge of groundwater aquifers. In addition, urbanization reduces natural vegetation, which plays an important role in reducing erosion and sedimentation, and filtering pollutants from water as it percolates into the soil. Urbanization also decreases water quality by increasing the amount of pollutants that enter waterways. Pollutants, including silt, herbicides, pesticides, fertilizers, trash, grease, oil, hydrocarbons, and heavy metals are constantly introduced to a developed environment. Stormwater often carries these pollutants from streets, parking lots, and landscaped areas to urban drainage systems that flow to natural streams, rivers, and lakes. These pollutants can pose a serious threat to the water quality of the streams, rivers, and lakes, and can have a negative impact on the ecology.

The construction of the proposed project would involve the removal of native vegetation, grading, and earth moving activities. This would expose native soils and increase the potential for erosion and sedimentation, which could have a negative impact on stormwater runoff and off-site water bodies. In addition, construction sites can also introduce water pollutants to stormwater runoff, including paints, solvents, concrete, drywall, pesticides and fertilizers, construction debris and trash, and spilled oil, fuel, and other fluids from construction vehicles. These activities will be covered by the EPA's NPDES General Storm Water Discharge Permit for Construction Activities. Therefore, best management practices would be required.

BMP 3: The following best management practices shall be implemented during the construction of the proposed project site to reduce potential water quality impacts:

- *Phase grading operations to reduce disturbed areas and time of exposure. Avoid grading and excavation during wet weather.*
- *Construct diversion dikes and drainage swales to channel runoff around the construction site.*
- *Delineate clearing limits, easements, setbacks, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive of unnecessary disturbances and exposure.*

- *Plant vegetation on exposed slopes or use erosion control blankets (e.g., jute matting, glass fiber or excelsior matting, mulch netting) to reduce the potential for erosion.*
- *Once grading is complete, stabilize the disturbed areas with permanent vegetation as soon as possible.*
- *Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them.*
- *Protect drainage courses, creeks, or catch basins with straw bales, silt fences, and/or temporary drainage swales.*
- *Protect storm drain inlets from sediment-laden runoff with sand bags barriers, filter fabric fences, block and gravel filters, and excavated drop inlet sediment traps.*
- *Prevent construction vehicles from tracking soil onto adjacent streets by constructing a temporary stone pad with a filter fabric underliner near the exit where dirt and mud can be washed from vehicles.*
- *Use dry-sweep methods to clean sediments from streets, driveways, and paved areas of the construction site.*
- *Maintain all construction vehicles and equipment. Inspect frequently for and repair leaks.*
- *Designate specific areas of the construction site, located well away from creeks or storm drain inlets, for auto and equipment parking and routine vehicle maintenance.*
- *Perform major maintenance, repair, and vehicle and equipment washing off site or in designated and controlled area. Clean up spills immediately.*
- *When vehicle fluids or materials such as paints, solvents, fertilizers, and other materials are spilled, cleanup immediately. Use dry cleanup techniques whenever possible.*
- *Store wet and dry building materials that have the potential to pollute runoff under cover and/or surrounded by berms when rain is forecast or during wet weather months.*
- *Cover and maintain dumpsters.*
- *Collect and properly dispose of construction debris, plant and organic material, trash, and hazardous materials as soon as possible.*
- *Plan roadwork and pavement construction to avoid stormwater pollution during wet weather months.*

With the implementation of the above best management practices, water quality impacts during construction would be reduced to a less than significant level.

After construction of the proposed project, the site would include the medical facility and paved surfaces, and landscaping with vegetation and ground cover. The landscaping would greatly reduce the potential for water quality impacts related to erosion and sedimentation. However, the conceptual plan for the development indicates the development would introduce impervious surfaces to the proposed project site. These impervious surfaces would increase the amount and rate of stormwater runoff on the site. This could result in potentially significant impacts to the existing storm drain system along Tydd Street. In addition, the widening of the access road on the proposed project site would also increase the potential for stormwater quality impacts. Access roads collect oil, grease, transmission and brake fluid, solvents, heavy metals, and other pollutants that are typically concentrated on surface streets. Because these pollutants are typically washed directly from impervious surface areas and are transported to storm drains and creeks, the increase of impervious surfaces on the site would result in potentially adverse water quality impacts. Therefore, best management practices specified below would be required.

BMP 4: The drainage plan for the proposed project shall include feasible post construction stormwater quality control measures. Such measures shall include any combination of the following techniques:

- *Design the proposed project to locate impervious surfaces as far away from natural drainage channels as possible and utilize vegetation and grass swales to decrease runoff velocity and filter stormwater pollutants.*
- *Install drop inlets that channel stormwater to a sedimentation trap and then to a new detention pond. Detention ponds should be designed to allow sediments and pollutants to settle, to release runoff at pre-development levels, and to filter nutrients in the runoff by including wetland plants.*
- *Install and regularly maintain catch basin or inlet inserts, grease/oil water separators, or media filters to capture and filter stormwater pollutants.*
- *Provide for natural filtration and percolation by utilizing rain gardens, bioswales, or other LID techniques where feasible.*

With the implementation of the above BMPs, stormwater quality impacts would be considered less than significant.

5.3.1 Surface Water

The Eureka Slough is the major surface water resource in the project area and is formed by the confluence of the Freshwater and Ryan Sloughs. Water quality in the Eureka Slough variants are cause by saltwater intrusion due to river flows from the Freshwater and Ryan Sloughs coupled with tidal actions within Humboldt Bay. Brackish water is very common at the Highway 101 Bridge and lessens upstream. At the project site, drainage from the proposed project could impact the water quality of Eureka Slough. However, implementation of BMP 4 above will lessen impacts to the surface water resources to a less than significant level.

5.3.2 Groundwater

There are no known aquifers within the proposed project site. Therefore, no impacts to groundwater resources would occur as a result of the proposed project.

5.3.3 Flooding

The proposed ODCHC medical facility lies within an area that was mapped by FEMA. A portion of the project site is situated within a 100-year flood hazard zone and approximately 20 percent of the site is within the 100-year flood zone. The ODCHC facility will avoid construction in the 100-year flood zone, therefore no impacts are anticipated.

5.3.4 Wetlands

A site examination noted that jurisdictional wetlands are present on and adjacent to the site. The wetlands report determined that there are two types of wetlands at the project site; estuarine wetlands that are influenced by tidal conditions and saline water; and palustrine wetlands that are fed by fresh water. The report recommended that the development incorporate setbacks or buffers. The proposed project will be designed with the appropriate set backs required for coastal zone wetlands.

No Action Alternative

Under the No Action Alternative, the proposed property would not be developed and existing water resource and water quality conditions would remain unchanged. No impacts related to water resources would occur with the No Action Alternative.

5.4 AIR QUALITY AND GLOBAL GREENHOUSE GASES

Ozone is produced by chemical reactions, involving nitrogen oxides (NO_x) and reactive organic gases (ROG) that are triggered by sunlight. Nitrogen oxides are created during combustion of fuels, while reactive organic gases are emitted during combustion and evaporation of organic solvents. Since ozone is not directly emitted to the atmosphere, but is formed as a result of photochemical reactions, it is considered a secondary pollutant.

PM₁₀ is small suspended particulate matter, 10 microns or less in diameter, which can enter the lungs. The major component of PM₁₀ is dust particles, nitrates, and sulfates. PM₁₀ is directly emitted to the atmosphere as a by-product of fuel combustion and wind erosion of soil and unpaved roads. Small particles are also created in the atmosphere through chemical reactions.

According to the URBEMIS model conducted for the project, the construction emissions project are as follows:

Table 9 – URBEMIS Calculations (Mitigated)

CONSTRUCTION EMISSION ESTIMATES (TONS/YEAR)							
	ROG	NO _x	CO	SO ₂	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
2011 (tpy, mitigated),	0.61	3.11	5.24	0.00	0.01	0.01	0.00
2010 (tpy, mitigated),	0.49	0.00	0.03	0.00	0.00	0.00	0.00
AREA SOURCE EMISSION ESTIMATES (TONS/YEAR)							
TOTALS (tpy, mitigated),	0.06	0.00	0.07	0.00	0.00		
OPERATIONAL (VEHICLE) EMISSION ESTIMATES (TONS/YEAR)							
TOTALS (tpy, mitigated),	0.25	0.43	3.06	0.00	0.27		
SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES (TONS/YEAR)							
TOTALS (tpy, mitigated),	0.31	0.43	3.13	0.00	0.27		
ROG - Reactive Organic Gases				CO - Carbon Monoxide			
NO _x - Nitrogen Oxides				SO ₂ - Sulfur Dioxide			
Ozone - ROG+NO _x				PM - Particulate Matter			

The 1990 amendments to federal Clean Air Act Section 176 required the EPA to promulgate rules to ensure that federal actions conform to the appropriate State Implementation Plan (SIP). These rules, known together as the *General Conformity Rule* (40 CFR §§ 51.850-.860 and 40 CFR §§ 93.150-160), require any federal agency responsible for an action in a nonattainment or maintenance area to determine that the action is either exempt from the General Conformity Rule's requirements or positively determine that the action conforms to the applicable SIP. In addition to the roughly 30 presumptive exemptions established and available in the General Conformity Rule, an agency may establish that forecast emission rates would be less than the specified emission rate thresholds, known as *de minimis* limits. An action is exempt from a conformity determination if an applicability analysis shows that the total direct and indirect emissions from the project would be less than the applicable *de minimis* thresholds and would not be regionally significant, which are defined as representing 10 percent or more of an area's emissions inventory or budget. From the perspective of the NCUAQMD, compliance with the control measures described in BMP 5 below would constitute sufficient best management practices to reduce PM₁₀ and PM_{2.5} impacts to a level considered less than significant.

BMP 5: The following control measures shall be implemented during the construction of the proposed project to reduce construction emissions of PM₁₀ and PM_{2.5}:

- *All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover, or vegetative ground cover.*
- *All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.*
- *All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.*
- *When materials are transported off-site, all materials shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of container shall be maintained*
- *All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden). Following the addition of materials to, or the removal of materials from, the surface or outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer or suppressant. Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each work day.*
- *Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.*
- *Limit traffic speeds on unpaved roads to 15 mph.*
- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.*
- *Suspend excavation and grading activities when winds exceed 20 mph.*
- *Install wheel washers for all exiting trucks, or wash off all trucks and equipment leaving the site.*

The direct effects of the proposed action will not impact air quality thresholds nor will the project create greenhouse gas “hot spots”. Greenhouse gas (GHG) emissions were considered. On February 18, 2010 the Council on Environmental Quality issued Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions. The February 18, 2010 memorandum states:

“This draft guidance is intended to help explain how agencies of the Federal government should analyze the environmental effects of GHG emissions and climate change when they describe the environmental effects of a proposed agency action in accordance with Section 102 of NEPA and the CEQ Regulations for Implementing the Procedural Provisions of NEPA, 40 C.F.R. parts 1500-1508. This draft guidance affirms the requirements of the statute and regulations and their applicability to GHGs and climate change impacts. CEQ proposes to advise Federal agencies that they should consider opportunities to reduce GHG emissions caused by proposed Federal actions and adapt their actions to climate change impacts throughout the NEPA process and to address these issues in their agency NEPA procedures”.

The GHG emissions effects of the Proposed Action and the No Action Alternative (no change in status) will not impact climate change as no GHG emissions will occur. Further, the February 18, 2010 memorandum directs “Where the proposed activity is subject to GHG emissions

accounting requirements, such as Clean Air Act reporting requirements that apply to stationary sources that directly emit 25,000 metric tons or more of CO₂-equivalent GHG on an annual basis, the agency should include this information in the NEPA documentation for consideration by decision makers and the public.”

With the implementation of the above measures, construction emission impacts would be considered less than significant.

No Action Alternative

Under the No Action Alternative, the proposed property would not be developed. Existing environmental conditions on the site would remain unchanged.

5.5 BIOLOGICAL RESOURCES

As a direct effect, the proposed project is not expected to impact rare or endangered plant or animal species.

No Action Alternative

Under the No Action Alternative, the proposed property would not be developed and would remain in its current status. Existing environmental conditions on the site would remain unchanged.

5.6 CULTURAL RESOURCES

Based on the letter response from the SHPO dated December 10, 2010, the project as described will not affect historic properties. However, the SHPO is recommending that cultural monitors from the Wiyot tribe be present during ground disturbing activities. Although not a mitigation measure, the ODCHC agrees with the SHPO's recommendation and will arrange for cultural monitors during earth moving activities. Additionally, under certain circumstances such as an unanticipated discovery, there may be additional responsibilities pursuant to 36 CFR Part 800. Therefore, if unanticipated resources are encountered, the following BMP will be implemented:

BMP 6: In the event that any prehistoric, historic, or paleontological resources are discovered during construction-related activities, all work within 50 feet of the resources will be halted and the Tribe shall consult with an archaeologist to assess the significance of the find. If any find is determined to be significant by the qualified archaeologist or the SHPO, then representatives from the Tribe will meet to determine the appropriate course of action.

No Action Alternative

Under the No Action Alternative, the proposed property would not be developed. Existing environmental conditions on the site would remain unchanged.

5.7 SOCIOECONOMIC CONDITIONS

Mitigation Measures

No mitigation measures are required as the project is not expected to have significant impacts.

5.7.1 Attitudes, Expectations, Lifestyles, and Cultural Values

Modest lifestyle changes for community members who utilize the Open Door Community Health Center in Eureka may result as an indirect impact of the proposed project. Due to the increased size of the clinic, the facility will be better able to handle patients and offer more efficient and

modern treatment. No other significant impacts to the attitudes, expectations, and cultural values would occur as a result of the proposed project.

Mitigation Measures

The proposed project would not have a negative impact on the attitudes, expectations, lifestyles, and cultural values of the community. In addition, the proposed project would expand the ODCHC's ability to provide preventative and routine health care. Therefore, impacts on the lifestyle of the area's residents would be considered beneficial. No mitigation measures are required.

No Action Alternative

Under the No Action Alternative, the proposed property would remain its current status. Existing environmental conditions on the site would remain unchanged.

5.8 COMMUNITY INFRASTRUCTURE

No significant adverse impacts on the local community infrastructure would occur as a direct or indirect result of the proposed project. The development of the medical facility will require minor service connections or service upgrades. The impacts of the project on the human environment are deemed beneficial.

5.8.1 Fire Protection

The proposed project would not create the demand for additional fire protection and emergency medical services in the area. However, the Eureka Fire Department conducted a fire flow test last year at the project site and ended up with a calculated flow of 1,294 gpm (gallons per minute). The minimum fire flow for the building would be 1,500 gpm. Therefore, the fire flow issues will need to be addressed during final project design including, but not limited to, infrastructure improvements and/or a sprinkler system installation. In addition, fire hydrants will be required in addition to a fire lane for site accessibility.

5.8.2 Law Enforcement

The proposed project would not directly increase the demand for law enforcement services in the area. Therefore, no impacts to law enforcement would occur as a result of the proposed project.

5.8.3 Schools

The proposed project would not directly increase the demand for educational services in the area. Therefore, no impacts to schools would likely occur as a result of the proposed project.

5.8.4 Solid Waste Disposal

The proposed project would not substantially increase the amount of solid waste generated at the proposed project site and disposed of at the HWMA Eureka transfer station. Therefore, no significant impacts to the capacity of regional landfills would likely occur as a result of the proposed project.

5.8.5 Gas & Electric Services

The proposed project would not substantially increase the amount of gas or electricity needed at the proposed project site. However the gas and electricity service provider (PG&E) will need to be contacted early in the project design process regarding gas and electric services to determine if special design factors will be necessary.

5.8.6 Communications Service

The proposed project would not directly increase the need for communications services at the proposed project site. Therefore, no significant impacts to the communications service providers would occur as a result of the proposed project.

5.8.7 Water Service

The proposed project would not directly increase the need for water services at the proposed project site. According to the City, there does not appear to be capacity issues, but as noted above, pressure issues for fire protection will need to be addressed (Sidnie Olson, November 9, 2010 letter). Therefore, no significant impacts to the water service provider would occur as a result of the proposed project.

5.8.8 Sanitary Sewer Services

The proposed project would not directly increase loads in the sanitary sewer system beyond capacity. Therefore, no significant impacts to the sanitary sewer service provider would occur as a result of the proposed project.

No Action Alternative

Under the No Action Alternative, the proposed property would not be developed and would remain in its current status. Existing environmental conditions on the site would remain unchanged.

5.9 RESOURCE USE PATTERNS

5.9.1 Hunting, Fishing, Gathering

Subsistence utilization of resources through hunting, fishing, and gathering occurs at low levels within the vicinity of the project area due to the developed nature of the City of Eureka. Such activities are not anticipated to be significantly impacted directly or indirectly by the proposed project.

5.9.2 Timber

There are no merchantable timber resources in the proposed project area. The timber industry will not be significantly impacted directly or indirectly by the proposed project.

5.9.3 Agriculture

Commercial agriculture is not a current land use activity within the study area. Agriculture will not be significantly impacted directly or indirectly by the proposed project.

5.9.4 Mining

Commercial mining is not a current land use activity within the study area. There are no known mineral or energy resources of local, regional, or national importance on the proposed project site according to the California Geological Survey. Mineral resources will not be significantly impacted directly or indirectly by the proposed project.

5.9.5 Recreation

The project site is currently undeveloped and is not used for direct recreational purposes. Indirectly, the site is utilized for walking and exercise by a few residents. The recreational character of the Eureka area will not be significantly impacted directly or indirectly by the proposed project.

5.9.6 Transportation Networks

The traffic study completed for the project indicates that the Level of Service and delay will significantly degrade by the project traffic at all the study intersections. The traffic study proposes reconfiguring the lanes as depicted in Appendix D. It is not possible to maintain the existing LOS for future conditions. The proposed project will include pedestrian and bicycle facilities along Tydd Street. These improvements will significantly facilitate the movement of pedestrians and cyclists in the project area. Below are the BMP's to reduce the delays at the study intersections to a less than significant level:

BMP 7:

- *Seek possible secondary access for the project from Humboldt Plaza north of the project site.*
- *Construct a bus shelter at the end of Tydd Street and provide adequate turnaround space for ETS bus.*
- *Construct new sidewalks on the north side of Tydd Street connecting to project site.*
- *Complete the sidewalk gaps with ADA compliance on West Avenue between Myrtle Avenue and Highway 101.*
- *Install speed reducing (traffic calming) measures on West Avenue between 6th Street and Tydd Street.*

No Action Alternative

Under the No Action Alternative, the proposed property would remain in its current condition. Existing environmental conditions on the site would remain unchanged.

5.10 OTHER VALUES

5.10.1 Wilderness

The project site is not located in a wilderness area. Wilderness will not be significantly impacted directly or indirectly by the proposed project.

5.10.2 Sound and Noise

Since short-term construction is needed to implement the proposed project, there would be a temporary insignificant amount of construction-level noise associated with the proposed project. After completion of construction, no significant noises due to facility operations would occur, nor would any new or existing sensitive receptors be created or impacted; therefore, no significant sound or noise impacts would occur as a result of the proposed project.

5.10.3 Public Health and Safety

There are no mapped sites found in the search of reasonably ascertainable government records either on the target properties or within the ASTM E 1527-05 search radius, nor does the subject property exhibit any characteristics that indicate the presence of contamination on site or contamination impacts to properties within ½ mile of the site.

5.10.4 Aesthetics

The aesthetics of the project area will not be significantly affected by the development of the proposed project. The facility construction will be designed to meet the requirements of the Design Review process of the City of Eureka. The surrounding neighborhood is developed with professional offices, general commercial buildings, senior apartments, and an RV Park, making the view of the medical clinic consistent with its surroundings. Therefore, no significant impacts to aesthetic values would occur as a result of the proposed project.

Mitigation Measures

Construction noise will be mitigated by limiting construction to daylight hours so as not to impact the quiet enjoyment of local residents.

No Action Alternative

Under the No Action Alternative, the proposed property would remain in the current condition. Existing environmental conditions on the site would remain unchanged.

5.11 ENVIRONMENTAL JUSTICE

Environmental Justice encompasses a broad range of impacts covered by NEPA, including impacts on the natural and physical environment and related social, cultural, and economic effects. Environmental Justice may arise from impacts to such things as human health on minority populations, low-income populations, and Indian Tribes. Executive Order 12898 (Environmental Justice, 59 Fed. Reg. 7629 [1994]) requires each federal agency to achieve environmental justice by addressing “disproportionately high and adverse human health and environmental effects on minority and low-income populations.”

The question of whether a proposed project raises environmental justice issues is highly sensitive to the history or circumstances of a particular community or population, the particular type of environmental or human health impact, and the nature of the proposed project itself. There is no standardized methodology for identification or analysis of Environmental Justice issues.

The demographics of the affected area have been examined to determine whether minority populations, low-income populations, or Indian tribes present in the area will be impacted by the proposed project. Based on the demographics of the area, a determination was made that the proposed project will not cause a disproportionately high or adverse impact on human health or environmental effects on minority populations, or low-income populations.

There is no indication that either the construction or operation of the ODCHC Medical Clinic facility would impact a higher minority population component or low-income population component than the general population of the surrounding area.

No Action Alternative

Under the No Action Alternative the site would remain unchanged and continue to be used in its present capacity.

6.0 CUMULATIVE IMPACTS

6.1 INTRODUCTION

NEPA guidance documents require the evaluation of environmental consequences including cumulative impacts. Cumulative impacts are broadly defined as those that “result from the incremental impacts of an action when added to other past and reasonably foreseeable future actions” (40 CFR 1508.7). Cumulative impacts by their nature can be difficult to identify and quantify. This section accounts for past actions within the project vicinity, factors in the foreseeable future, as well as the direct consequences of the proposed action.

The following cumulative impacts and the associated mitigation measures are projected to occur because of the proposed undertaking in the immediate vicinity.

6.2 LAND RESOURCES

The proposed project is not expected to result in any substantial geotechnical hazards or impacts related to construction of structures and internal road improvements. Applicable regulations regarding control of erosion will be adhered to during the construction phase of this project. The proposed project will not result in changes related to land use. Therefore, no cumulative impacts to land use would occur as a result of the proposed project.

6.3 WATER RESOURCES

The proposed action will not result in a cumulative noncompliance of floodplain or water quality regulations. Therefore, no significant impact to water resources would occur as a result of the proposed project.

6.4 AIR QUALITY

The construction of the proposed project will result in the net increase of particulate matter during construction. The project will feature construction specifications in the design specifically to limit the creation of particulate emissions during construction. It has been ascertained that the proposed project will comply with the Clean Air Act and as such, no significant cumulative impacts to air quality are anticipated.

6.5 BIOLOGICAL RESOURCES

As the general project vicinity is highly urbanized, future development in the project area will not affect biological resources in a cumulative manner.

6.6 CULTURAL RESOURCES

As the general project vicinity is highly urbanized, future development in the project area will not affect cultural resources in a cumulative manner.

6.7 SOCIOECONOMIC CONDITIONS

The proposed action will partially address the need for expanded health care, which in turn may create an increased demand for public health and social services. However, these programs are readily available on or near the Eureka area and can accommodate an increased demand. No significant adverse affects on the socioeconomic conditions would likely occur as a result of the proposed project.

6.8 COMMUNITY INFRASTRUCTURE

The proposed project would not cumulatively affect the community infrastructure since additional service connections will be improved to serve the medical clinic addition.

6.9 RESOURCE USE PATTERNS

The proposed project would not cumulatively affect the area's natural resources, or recreation uses.

6.10 OTHER VALUES

6.10.1 Sound and Noise

The proposed project will generate noise mainly in the form of heavy equipment and vehicles traveling to the proposed project site during the construction phase. There will be some noise increase associated with the project during construction, but not at levels which exceed current thresholds. Thus, cumulative impacts to noise will be less than significant.

6.10.2 Public Health and Safety

The project is under the jurisdiction of the City of Eureka's building, electrical, fire and safety standards for all facilities. All potential development at the project site will be subject to these regulations and codes. Therefore, there will be no cumulative impact on health and safety.

There are no hazardous materials on the project site and it is not anticipated that hazardous materials will be used or stored on site. The proposed action will not contribute cumulatively to the demand for hazardous material handling capacity.

6.10.3 Public Services

The proposed project would not significantly increase the demand for public services at the project site. Therefore, no cumulative impacts to public services would occur as a result of the proposed project.

6.10.4 Utilities

The proposed project would not significantly increase the demand for utilities at the project site. Therefore, no cumulative impacts to utilities would occur as a result of the proposed project.

7.0 LIST OF PREPARERS

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8.0 SOURCE DOCUMENTATION

- A Watershed Analysis of Freshwater Creek, Humboldt County, California, Atephen Ahern, 1981.
- Fault-Rupture Hazard Zones in California, Earl W. Hart and William A. Bryant, 1997
- Federal Emergency Management Agency website: www.fema.gov, April 21, 2010.
- A California Flora Supplement, University of California Press, 1968.
- A Field Guide to Pacific States Wildflowers, Theodore F. Niehaus & Charles L. Ripper, February, 1992.
- A Field Guide to the Mammals, William Henry Burt and Richard Philip Grossenheider, 1976.
- California Highways Highway Statistics webpage, cahighways.org, July 20.
- California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, Special Publication No. 1, Fifth Edition, California Native Plants Society, February 1994.
- California Flood Management: An Evaluation of Flood Damage Prevention Programs, Bulletin 199, California Department of water Resources, 1978.
- California Patterns: A Geographical and Historical Atlas, David Hornbeck, Phillip Kane, David L. Fuller, Mayfield Publishing Company, 1993.
- Determining Conformity of General Federal Actions to State or Federal Implementation Plans (amending 40 CFR Parts 6, 51, and 93), USEPA, 58 FR 63215, November 30, 1993.
- Districts of California, State of California, Division of Mines and Geology, 1970.
- Earthquakes, Bruce A. Bolt, Copyright 1978, 1988 by W.H. Freeman and Company.
- Geologic Map of California, Olaf P. Jenkins Edition, Fresno Sheet, 1965.
- Guide for the Preparation of Traffic Impact Studies, State of California, Department of Transportation, December 2002
- Humboldt Bay Historic and Cultural Resource Characterization and Roundtable, NOAA Coastal Services Center, 2008.
- Inventory of Rare and Endangered Vascular Plants of California, California Native Plant Society, 1980.
- Juvenile Salmonid use of Freshwater Slough and Tidal Portion of Freshwater Creek, Humboldt Bay, California, 2003 Annual Report, State of California, Department of Fish and Game, 2006.
- National Environmental Policy Act; Revising Implementing Procedures, U.S. Department of Interior, FR 10438/Vol. 53, No. 62, March 31, 1988.
- Preliminary Fault Activity of California, Jennings, Department of Mining and Geology OFR 92-03, 1992.
- Probabilistic Seismic Hazard Assessment for the State of California, California Department of Conservation, Division of Mines and Geology, Open-File Report 96-08 and the U.S. Department of the Interior U.S. Geological Survey Open-File Report 96-706, 1996
- Special Publication 42, Fault-rupture Hazard Zones in California, California Department of Conservation, Revised 1997.

The Jepson Manual, Higher Plants of California, *James C. Hickman*, Editor, University of California Press, 1993.

The Noise Guidebook, U.S. Department of Housing and Urban Development, No Date.

The EDR Radius Map with GeoCheck, ODCHC Tydd Street, Eureka, CA, October 15, 2010.

Web Soil Survey of Eureka, California, Natural Resource Conservation Service, 2010.

Wetland Values: Concepts and Methods for Wetlands Evaluation, U.S. Army Corps of Engineers, February 1979.

U.S. Census Bureau, State and County QuickFacts, November 12, 2010.

Webpage's Consulted:

Humboldt County GIS Portal:

<http://gis.co.humboldt.ca.us/>

City of Eureka GIS:

<http://www.ci.eureka.ca.gov/depts/engineering/gis.asp>

Attachment A

URBEMIS Air Quality Analysis

URBEMIS 2002 For Windows 8.7.0

File Name: E:\7100\7119 ODCHC - Community Health Center\7119.01 ENV Assessment\06 Planning\Air and GHG.urb
 Project Name: Open Door Community Health Clinic - Tydd Street
 Project Location: Mountain Counties and Rural Counties
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011 ***							
TOTALS (lbs/day, unmitigated)	42.66	252.10	364.00	0.00	10.63	7.61	3.02
TOTALS (lbs/day, mitigated)	42.66	216.87	363.92	0.00	0.67	0.57	0.10
*** 2012 ***							
TOTALS (lbs/day, unmitigated)	40.77	0.06	1.38	0.00	0.02	0.00	0.02
TOTALS (lbs/day, mitigated)	40.77	0.06	1.38	0.00	0.02	0.00	0.02

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	0.50	0.00	0.78	0.00	0.00
TOTALS (lbs/day, mitigated)	0.50	0.00	0.78	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	1.33	2.34	16.57	0.02	1.57
TOTALS (lbs/day, mitigated)	1.26	2.21	15.65	0.02	1.48

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	1.82	2.34	17.35	0.02	1.57
TOTALS (lbs/day, mitigated)	1.75	2.21	16.43	0.02	1.49

URBEMIS 2002 For Windows 8.7.0

File Name: E:\7100\7119 ODCHC - Community Health Center\7119.01 ENV Assessment\06 Planning\Air and GHG.urb
 Project Name: Open Door Community Health Clinic - Tydd Street
 Project Location: Mountain Counties and Rural Counties
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011 ***							
TOTALS (lbs/day, unmitigated)	42.66	252.10	364.00	0.00	10.63	7.61	3.02
TOTALS (lbs/day, mitigated)	42.66	216.87	363.92	0.00	0.67	0.57	0.10
*** 2012 ***							
TOTALS (lbs/day, unmitigated)	40.77	0.06	1.38	0.00	0.02	0.00	0.02
TOTALS (lbs/day, mitigated)	40.77	0.06	1.38	0.00	0.02	0.00	0.02

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	0.37	0.00	0.00	0.00	0.00
TOTALS (lbs/day, mitigated)	0.37	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	1.64	2.80	20.16	0.02	1.57
TOTALS (lbs/day, mitigated)	1.55	2.64	19.04	0.02	1.48

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day, unmitigated)	2.02	2.80	20.16	0.02	1.57
TOTALS (lbs/day, mitigated)	1.93	2.64	19.04	0.02	1.48

URBEMIS 2002 For Windows 8.7.0

File Name: E:\7100\7119 ODCHC - Community Health Center\7119.01 ENV Assessment\06 Planning\Air and GHG.urb
 Project Name: Open Door Community Health Clinic - Tydd Street
 Project Location: Mountain Counties and Rural Counties
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011 ***							
TOTALS (tpy, unmitigated)	0.61	3.61	5.24	0.00	0.15	0.11	0.04
TOTALS (tpy, mitigated)	0.61	3.11	5.24	0.00	0.01	0.01	0.00
*** 2012 ***							
TOTALS (tpy, unmitigated)	0.49	0.00	0.03	0.00	0.00	0.00	0.00
TOTALS (tpy, mitigated)	0.49	0.00	0.03	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.06	0.00	0.07	0.00	0.00
TOTALS (tpy, mitigated)	0.06	0.00	0.07	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.26	0.45	3.24	0.00	0.29
TOTALS (tpy, mitigated)	0.25	0.43	3.06	0.00	0.27

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.32	0.46	3.31	0.00	0.29
TOTALS (tpy, mitigated)	0.31	0.43	3.13	0.00	0.27

URBEMIS 2002 For Windows 8.7.0

File Name: E:\7100\7119 ODCHC - Community Health Center\7119.01 ENV Assessment\06 Planning\Air and GHG.urb
 Project Name: Open Door Community Health Clinic - Tydd Street
 Project Location: Mountain Counties and Rural Counties
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

Construction Start Month and Year: April, 2011
 Construction Duration: 12
 Total Land Use Area to be Developed: 1.2 acres
 Maximum Acreage Disturbed Per Day: 0.3 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 26600

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	3.00	-	3.00
Off-Road Diesel	42.33	250.87	357.92	-	7.58	7.58	0.00
On-Road Diesel	0.04	0.76	0.16	0.00	0.02	0.02	0.00
Worker Trips	0.29	0.47	5.92	0.00	0.03	0.01	0.02
Maximum lbs/day	42.66	252.10	364.00	0.00	10.63	7.61	3.02
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Max lbs/day all phases	42.66	252.10	364.00	0.00	10.63	7.61	3.02
*** 2012***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	40.67	-	-	-	-	-	-
Arch Coatings Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	40.77	0.06	1.38	0.00	0.02	0.00	0.02
Max lbs/day all phases	40.77	0.06	1.38	0.00	0.02	0.00	0.02

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Apr '11
 Phase 2 Duration: 1.3 months
 On-Road Truck Travel (VMT): 42
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Excavators	180	0.580	8.0
2	Graders	174	0.575	8.0
6	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '11
 Phase 3 Duration: 10.7 months
 Start Month/Year for SubPhase Building: May '11
 SubPhase Building Duration: 10.7 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
Start Month/Year for SubPhase Architectural Coatings: Feb '12				
SubPhase Architectural Coatings Duration: 1.1 months				
Start Month/Year for SubPhase Asphalt: Mar '12				
SubPhase Asphalt Duration: 0.5 months				
Acres to be Paved: 0				
Off-Road Equipment				
No.	Type	Horsepower	Load Factor	Hours/Day

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.08	-	0.08
Off-Road Diesel	42.33	215.75	357.92	-	0.56	0.56	0.00
On-Road Diesel	0.04	0.65	0.16	0.00	0.00	0.00	0.00
Worker Trips	0.29	0.46	5.84	0.00	0.03	0.01	0.02
Maximum lbs/day	42.66	216.87	363.92	0.00	0.67	0.57	0.10
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Max lbs/day all phases	42.66	216.87	363.92	0.00	0.67	0.57	0.10

*** 2012***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00

On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	40.67	-	-	-	-	-	-
Arch Coatings Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	40.77	0.06	1.38	0.00	0.02	0.00	0.02
Max lbs/day all phases	40.77	0.06	1.38	0.00	0.02	0.00	0.02

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
 Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
 Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
 Phase 2: Off-Road Diesel Exhaust: Use aqueous diesel fuel
 Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
 Phase 2: Off-Road Diesel Exhaust: Use diesel particulate filter
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
 Phase 2: On-Road Diesel Exhaust: Use aqueous diesel fuel
 Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
 Phase 2: On-Road Diesel Exhaust: Use diesel particulate filter
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
 Phase 2: Stockpiles: Cover all stock piles with tarps
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
 Phase 2: Unpaved Roads: Pave all haul roads
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 92.5%)
 Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
 Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
 Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Apr '11
 Phase 2 Duration: 1.3 months
 On-Road Truck Travel (VMT): 42
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Excavators	180	0.580	8.0
2	Graders	174	0.575	8.0
6	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions
 Start Month/Year for Phase 3: May '11
 Phase 3 Duration: 10.7 months

No.	Type	Horsepower	Load Factor	Hours/Day
Start Month/Year for SubPhase Building: May '11				
SubPhase Building Duration: 10.7 months				
Off-Road Equipment				
No.	Type	Horsepower	Load Factor	Hours/Day
Start Month/Year for SubPhase Architectural Coatings: Feb '12				
SubPhase Architectural Coatings Duration: 1.1 months				
Start Month/Year for SubPhase Asphalt: Mar '12				
SubPhase Asphalt Duration: 0.5 months				
Acres to be Paved: 0				
Off-Road Equipment				
No.	Type	Horsepower	Load Factor	Hours/Day

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.37	-	-	-	-
TOTALS (lbs/day, unmitigated)	0.37	0.00	0.00	0.00	0.00

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Mitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.37	-	-	-	-
TOTALS (lbs/day, mitigated)	0.37	0.00	0.00	0.00	0.00

Area Source Mitigation Measures

Commercial Increase Efficiency Beyond Title 24
Percent Reduction: 20
Industrial Increase Efficiency Beyond Title 24
Percent Reduction: 20

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Medical office building	1.64	2.80	20.16	0.02	1.57
TOTAL EMISSIONS (lbs/day)	1.64	2.80	20.16	0.02	1.57

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Medical office building		5.18 trips/1000 sq. ft.	26.60	137.79
Sum of Total Trips				137.79
Total Vehicle Miles Traveled				1,033.48

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Medical office building				7.0	3.5	89.5

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Medical office building	1.55	2.64	19.04	0.02	1.48
TOTAL EMISSIONS (lbs/day)	1.55	2.64	19.04	0.02	1.48
OnRoad Reduction(lbs/day)	0.00	0.00	0.00	0.00	0.00
EMISSIONS-Reduct(lbs/day)	1.55	2.64	19.04	0.02	1.48
PERCENTAGE REDUCTION %	6	6	6	6	6

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Medical office building		4.89 trips/1000 sq. ft.	26.60	130.17
Sum of Total Trips				130.17
Total Vehicle Miles Traveled				976.35

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Medical office building	7.0	3.5	89.5
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MITIGATION OPTIONS SELECTED

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.96%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 30
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 30
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 2.56%
Inputs Selected:
The Number of Intersections per Square Mile is 6
The Percent of Streets with Sidewalks on One Side is 80%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 25%

Non-Residential Parking Supply Mitigation for Medical office building

Percent Reduction in Trips is 0%
The Parking Supply reduction was LESS THAN or EQUAL TO the sum of Mix of Uses, Local Serving Retail, Transit Service and Bike/Ped mitigation measures: 5.53.
Therefore the Parking Supply percent will be NOT BE USED.
Inputs Selected:
For the 26.6 units of Medical office building the Parking Provision was set to 90
The ITE Parking Rate manual states that: 93.9 spaces should be provided.

Non-Residential On-Road Truck Mitigation:Pounds/Day & Tons/Year Estimates

Inputs Selected:

	ROG	NOx	CO	SO2	PM10
Pounds per Day Reduction	0.00	0.00	0.00	0.00	0.00
Tons per Year Reduction	0.00	0.00	0.00	0.00	0.00

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 2 mitigation measure On-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.
Phase 2 mitigation measure On-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Pave all haul roads
has been changed from off to on.
Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Changes made to the default values for Area

The natural gas option switch changed from on to off.
The area source mitigation measure option switch changed from off to on.
Mitigation measure Commercial Increase Efficiency Beyond Title 24
has been changed from off to on.
Mitigation measure Industrial Increase Efficiency Beyond Title 24
has been changed from off to on.

Changes made to the default values for Operations

The mitigation option switch changed from off to on.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Non-Res Parking Supply Mitigation changed from off to on.
The On-Road Truck Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: E:\7100\7119 ODCHC - Community Health Center\7119.01 ENV Assessment\06 Planning\Air and GHG.urb
 Project Name: Open Door Community Health Clinic - Tydd Street
 Project Location: Mountain Counties and Rural Counties
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: April, 2011
 Construction Duration: 12
 Total Land Use Area to be Developed: 1.2 acres
 Maximum Acreage Disturbed Per Day: 0.3 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 26600

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	3.00	-	3.00
Off-Road Diesel	42.33	250.87	357.92	-	7.58	7.58	0.00
On-Road Diesel	0.04	0.76	0.16	0.00	0.02	0.02	0.00
Worker Trips	0.29	0.47	5.92	0.00	0.03	0.01	0.02
Maximum lbs/day	42.66	252.10	364.00	0.00	10.63	7.61	3.02
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Max lbs/day all phases	42.66	252.10	364.00	0.00	10.63	7.61	3.02
*** 2012***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	40.67	-	-	-	-	-	-
Arch Coatings Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	40.77	0.06	1.38	0.00	0.02	0.00	0.02
Max lbs/day all phases	40.77	0.06	1.38	0.00	0.02	0.00	0.02

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Apr '11
 Phase 2 Duration: 1.3 months
 On-Road Truck Travel (VMT): 42
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Excavators	180	0.580	8.0
2	Graders	174	0.575	8.0
6	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '11
 Phase 3 Duration: 10.7 months
 Start Month/Year for SubPhase Building: May '11
 SubPhase Building Duration: 10.7 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
Start Month/Year for SubPhase Architectural Coatings: Feb '12				
SubPhase Architectural Coatings Duration: 1.1 months				
Start Month/Year for SubPhase Asphalt: Mar '12				
SubPhase Asphalt Duration: 0.5 months				
Acres to be Paved: 0				
Off-Road Equipment				
No.	Type	Horsepower	Load Factor	Hours/Day

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.08	-	0.08
Off-Road Diesel	42.33	215.75	357.92	-	0.56	0.56	0.00
On-Road Diesel	0.04	0.65	0.16	0.00	0.00	0.00	0.00
Worker Trips	0.29	0.46	5.84	0.00	0.03	0.01	0.02
Maximum lbs/day	42.66	216.87	363.92	0.00	0.67	0.57	0.10
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Max lbs/day all phases	42.66	216.87	363.92	0.00	0.67	0.57	0.10

*** 2012***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00

On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Arch Coatings Off-Gas	40.67	-	-	-	-	-	-
Arch Coatings Worker Trips	0.05	0.03	0.69	0.00	0.01	0.00	0.01
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	40.77	0.06	1.38	0.00	0.02	0.00	0.02
Max lbs/day all phases	40.77	0.06	1.38	0.00	0.02	0.00	0.02

Construction-Related Mitigation Measures

- Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
- Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
- Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
- Phase 2: Off-Road Diesel Exhaust: Use aqueous diesel fuel
Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
- Phase 2: Off-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
- Phase 2: On-Road Diesel Exhaust: Use aqueous diesel fuel
Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
- Phase 2: On-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
- Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
- Phase 2: Unpaved Roads: Pave all haul roads
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 92.5%)
- Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Apr '11
Phase 2 Duration: 1.3 months
On-Road Truck Travel (VMT): 42
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Excavators	180	0.580	8.0
2	Graders	174	0.575	8.0
6	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: May '11
Phase 3 Duration: 10.7 months

Start Month/Year for SubPhase Building: May '11
SubPhase Building Duration: 10.7 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
Start Month/Year for SubPhase Architectural Coatings: Feb '12				
SubPhase Architectural Coatings Duration: 1.1 months				
Start Month/Year for SubPhase Asphalt: Mar '12				
SubPhase Asphalt Duration: 0.5 months				
Acres to be Paved: 0				
Off-Road Equipment				
No.	Type	Horsepower	Load Factor	Hours/Day

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0	0.00
Hearth - No summer emissions					
Landscaping	0.12	0.00	0.78	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.37	-	-	-	-
TOTALS (lbs/day, unmitigated)	0.50	0.00	0.78	0.00	0.00

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)					
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0	0.00
Hearth - No summer emissions					
Landscaping	0.12	0.00	0.78	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.37	-	-	-	-
TOTALS (lbs/day, mitigated)	0.50	0.00	0.78	0.00	0.00

Area Source Mitigation Measures

Commercial Increase Efficiency Beyond Title 24
Percent Reduction: 20
Industrial Increase Efficiency Beyond Title 24
Percent Reduction: 20

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Medical office building	1.33	2.34	16.57	0.02	1.57
TOTAL EMISSIONS (lbs/day)	1.33	2.34	16.57	0.02	1.57

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 60 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Medical office building		5.18 trips/1000 sq. ft.	26.60	137.79
Sum of Total Trips				137.79
Total Vehicle Miles Traveled				1,033.48

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Medical office building				7.0	3.5	89.5

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Medical office building	1.26	2.21	15.65	0.02	1.48
TOTAL EMISSIONS (lbs/day)	1.26	2.21	15.65	0.02	1.48
OnRoad Reduction(lbs/day)	0.00	0.00	0.00	0.00	0.00
EMISSIONS-Reduct(lbs/day)	1.26	2.21	15.65	0.02	1.48
PERCENTAGE REDUCTION %	5	6	6	6	6

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Temperature (F): 60 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Medical office building		4.89 trips/1000 sq. ft.	26.60	130.17
Sum of Total Trips				130.17
Total Vehicle Miles Traveled				976.35

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Medical office building	7.0	3.5	89.5
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MITIGATION OPTIONS SELECTED

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.96%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 30
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 30
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 2.56%
Inputs Selected:
The Number of Intersections per Square Mile is 6
The Percent of Streets with Sidewalks on One Side is 80%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 25%

Non-Residential Parking Supply Mitigation for Medical office building

Percent Reduction in Trips is 0%
The Parking Supply reduction was LESS THAN or EQUAL TO the sum of Mix of Uses, Local Serving Retail, Transit Service and Bike/Ped mitigation measures: 5.53.
Therefore the Parking Supply percent will be NOT BE USED.
Inputs Selected:
For the 26.6 units of Medical office building the Parking Provision was set to 90
The ITE Parking Rate manual states that: 93.9 spaces should be provided.

Non-Residential On-Road Truck Mitigation:Pounds/Day & Tons/Year Estimates

Inputs Selected:

	ROG	NOx	CO	SO2	PM10
Pounds per Day Reduction	0.00	0.00	0.00	0.00	0.00
Tons per Year Reduction	0.00	0.00	0.00	0.00	0.00

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 2 mitigation measure On-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.
Phase 2 mitigation measure On-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Pave all haul roads
has been changed from off to on.
Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Changes made to the default values for Area

The natural gas option switch changed from on to off.
The area source mitigation measure option switch changed from off to on.
Mitigation measure Commercial Increase Efficiency Beyond Title 24
has been changed from off to on.
Mitigation measure Industrial Increase Efficiency Beyond Title 24
has been changed from off to on.

Changes made to the default values for Operations

The mitigation option switch changed from off to on.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Non-Res Parking Supply Mitigation changed from off to on.
The On-Road Truck Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: E:\7100\7119 ODCHC - Community Health Center\7119.01 ENV Assessment\06 Planning\Air and GHG.urb
 Project Name: Open Door Community Health Clinic - Tydd Street
 Project Location: Mountain Counties and Rural Counties
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Tons/Year)

Construction Start Month and Year: April, 2011
 Construction Duration: 12
 Total Land Use Area to be Developed: 1.2 acres
 Maximum Acreage Disturbed Per Day: 0.3 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 26600

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.04	-	0.04
Off-Road Diesel	0.61	3.59	5.12	-	0.11	0.11	0.00
On-Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.01	0.07	0.00	0.00	0.00	0.00
Total tons/year	0.61	3.61	5.19	0.00	0.15	0.11	0.04
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total all phases tons/yr	0.61	3.61	5.24	0.00	0.15	0.11	0.04
*** 2012***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.49	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.49	0.00	0.03	0.00	0.00	0.00	0.00
Total all phases tons/yr	0.49	0.00	0.03	0.00	0.00	0.00	0.00

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Apr '11
 Phase 2 Duration: 1.3 months
 On-Road Truck Travel (VMT): 42
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Excavators	180	0.580	8.0
2	Graders	174	0.575	8.0
6	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: May '11
 Phase 3 Duration: 10.7 months
 Start Month/Year for SubPhase Building: May '11
 SubPhase Building Duration: 10.7 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
Start Month/Year for SubPhase Architectural Coatings: Feb '12				
SubPhase Architectural Coatings Duration: 1.1 months				
Start Month/Year for SubPhase Asphalt: Mar '12				
SubPhase Asphalt Duration: 0.5 months				
Acres to be Paved: 0				
Off-Road Equipment				
No.	Type	Horsepower	Load Factor	Hours/Day

CONSTRUCTION EMISSION ESTIMATES MITIGATED (tons/year)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2011***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.61	3.09	5.12	-	0.01	0.01	0.00
On-Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.01	0.07	0.00	0.00	0.00	0.00
Total tons/year	0.61	3.11	5.19	0.00	0.01	0.01	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total all phases tons/yr	0.61	3.11	5.24	0.00	0.01	0.01	0.00

*** 2012***

Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00

On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.49	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.49	0.00	0.03	0.00	0.00	0.00	0.00
Total all phases tons/yr	0.49	0.00	0.03	0.00	0.00	0.00	0.00

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
 Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
 Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
 Phase 2: Off-Road Diesel Exhaust: Use aqueous diesel fuel
 Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
 Phase 2: Off-Road Diesel Exhaust: Use diesel particulate filter
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
 Phase 2: On-Road Diesel Exhaust: Use aqueous diesel fuel
 Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
 Phase 2: On-Road Diesel Exhaust: Use diesel particulate filter
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
 Phase 2: Stockpiles: Cover all stock piles with tarps
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
 Phase 2: Unpaved Roads: Pave all haul roads
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 92.5%)
 Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
 Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
 Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Apr '11
 Phase 2 Duration: 1.3 months
 On-Road Truck Travel (VMT): 42
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Excavators	180	0.580	8.0
2	Graders	174	0.575	8.0
6	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
1	Rollers	114	0.430	8.0
1	Rubber Tired Dozers	352	0.590	8.0
1	Scrapers	313	0.660	8.0
3	Tractor/Loaders/Backhoes	79	0.465	8.0
1	Trenchers	82	0.695	8.0

Phase 3 - Building Construction Assumptions
 Start Month/Year for Phase 3: May '11
 Phase 3 Duration: 10.7 months

Start Month/Year for SubPhase Building: May '11
 SubPhase Building Duration: 10.7 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
Start Month/Year for SubPhase Architectural Coatings: Feb '12				
SubPhase Architectural Coatings Duration: 1.1 months				
Start Month/Year for SubPhase Asphalt: Mar '12				
SubPhase Asphalt Duration: 0.5 months				
Acres to be Paved: 0				
Off-Road Equipment				
No.	Type	Horsepower	Load Factor	Hours/Day

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.01	0.00	0.07	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.05	-	-	-	-
TOTALS (tpy, unmitigated)	0.06	0.00	0.07	0.00	0.00

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Mitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.01	0.00	0.07	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.05	-	-	-	-
TOTALS (tpy, mitigated)	0.06	0.00	0.07	0.00	0.00

Area Source Mitigation Measures

Commercial Increase Efficiency Beyond Title 24
Percent Reduction: 20
Industrial Increase Efficiency Beyond Title 24
Percent Reduction: 20

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Medical office building	0.26	0.45	3.24	0.00	0.29
TOTAL EMISSIONS (tons/yr)	0.26	0.45	3.24	0.00	0.29

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Medical office building		5.18 trips/1000 sq. ft.	26.60	137.79
Sum of Total Trips				137.79
Total Vehicle Miles Traveled				1,033.48

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Medical office building				7.0	3.5	89.5

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Medical office building	0.25	0.43	3.06	0.00	0.27
TOTAL EMISSIONS (tons/yr)	0.25	0.43	3.06	0.00	0.27
OnRoad Reduction(tons/yr)	0.00	0.00	0.00	0.00	0.00
EMISSIONS-Reduct(tons/yr)	0.25	0.43	3.06	0.00	0.27
PERCENTAGE REDUCTION %	5	6	6	6	6

Does not include correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2005 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Medical office building		5.18 trips/1000 sq. ft.	26.60	137.79
Sum of Total Trips				137.79
Total Vehicle Miles Traveled				1,033.48

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	56.10	2.30	97.10	0.60
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.50	1.90	96.80	1.30
Med Truck 5,751- 8,500	6.80	1.50	95.60	2.90
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
Heavy-Heavy 33,001-60,000	0.80	0.00	12.50	87.50
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.60	87.50	12.50	0.00
School Bus	0.30	0.00	0.00	100.00
Motor Home	1.40	14.30	78.60	7.10

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Medical office building	7.0	3.5	89.5
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MITIGATION OPTIONS SELECTED

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.96%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 30
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 30
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 2.56%
Inputs Selected:
The Number of Intersections per Square Mile is 6
The Percent of Streets with Sidewalks on One Side is 80%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 25%

Non-Residential Parking Supply Mitigation for Medical office building

Percent Reduction in Trips is 0%
The Parking Supply reduction was LESS THAN or EQUAL TO the sum of Mix of Uses, Local Serving Retail, Transit Service and Bike/Ped mitigation measures: 5.53.
Therefore the Parking Supply percent will be NOT BE USED.
Inputs Selected:
For the 26.6 units of Medical office building the Parking Provision was set to 90
The ITE Parking Rate manual states that: 93.9 spaces should be provided.

Non-Residential On-Road Truck Mitigation:Pounds/Day & Tons/Year Estimates

Inputs Selected:

	ROG	NOx	CO	SO2	PM10
Pounds per Day Reduction	0.00	0.00	0.00	0.00	0.00
Tons per Year Reduction	0.00	0.00	0.00	0.00	0.00

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

- Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas has been changed from off to on.
- Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly has been changed from off to on.
- Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.
- Phase 2 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel has been changed from off to on.
- Phase 2 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter has been changed from off to on.
- Phase 2 mitigation measure On-Road Diesel Exhaust: Use aqueous diesel fuel has been changed from off to on.
- Phase 2 mitigation measure On-Road Diesel Exhaust: Use diesel particulate filter has been changed from off to on.
- Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps has been changed from off to on.
- Phase 2 mitigation measure Unpaved Roads: Pave all haul roads has been changed from off to on.
- Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.

Changes made to the default values for Area

- The natural gas option switch changed from on to off.
- The area source mitigation measure option switch changed from off to on.
- Mitigation measure Commercial Increase Efficiency Beyond Title 24 has been changed from off to on.
- Mitigation measure Industrial Increase Efficiency Beyond Title 24 has been changed from off to on.

Changes made to the default values for Operations

- The mitigation option switch changed from off to on.
- The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
- The Res and Non-Res Transit Service Mitigation changed from off to on.
- The Res and Non-Res Ped/Bike Mitigation changed from off to on.
- The Non-Res Parking Supply Mitigation changed from off to on.
- The On-Road Truck Mitigation changed from off to on.

Attachment B

USFWS Species List

Listed/Proposed Threatened and Endangered Species for the EUREKA Quad (Candidates Included)

November 11, 2010

Document number: 583589009-14237

KEY:

(PE) Proposed Endangered Proposed in the Federal Register as being in danger of extinction
 (PT) Proposed Threatened Proposed as likely to become endangered within the foreseeable future
 (E) Endangered Listed in the Federal Register as being in danger of extinction
 (T) Threatened Listed as likely to become endangered within the foreseeable future
 (C) Candidate Candidate which may become a proposed species Habitat Y = Designated, P = Proposed, N = None Designated
 * Denotes a species Listed by the National Marine Fisheries Service

Type	Scientific Name	Common Name	Category	Critical Habitat
Plants				
	<i>Erysimum menziesii</i>	Menzies' wallflower	E	N
	<i>Layia carnosa</i>	beach layia	E	N
	<i>Lilium occidentale</i>	western lily	E	N
Invertebrates				
*	<i>Haliotis cracherodii</i>	black abalone	PE	N
Fish				
*	<i>Acipenser medirostris</i>	green sturgeon	T	Y
	<i>Eucyclogobius newberryi</i>	tidewater goby	E	Y
*	<i>Oncorhynchus kisutch</i>	S. OR/N. CA coho salmon	T	Y
*	<i>Oncorhynchus mykiss</i>	Northern California steelhead	T	Y
*	<i>Oncorhynchus tshawytscha</i>	CA coastal chinook salmon	T	Y
Reptiles				
*	<i>Caretta caretta</i>	loggerhead turtle	T	N
*	<i>Chelonia mydas (incl. agassizi)</i>	green turtle	T	N
*	<i>Dermochelys coriacea</i>	leatherback turtle	E	Y
*	<i>Lepidochelys olivacea</i>	olive (=Pacific) ridley sea turtle	T	N
Birds				
	<i>Brachyramphus marmoratus</i>	marbled murrelet	T	Y
	<i>Charadrius alexandrinus nivosus</i>	western snowy plover	T	Y
	<i>Coccyzus americanus</i>	Western yellow-billed cuckoo	C	N
	<i>Phoebastria albatrus</i>	short-tailed albatross	E	N
	<i>Strix occidentalis caurina</i>	northern spotted owl	T	Y
	<i>Synthliboramphus hypoleucus</i>	Xantus's murrelet	C	N
Mammals				
*	<i>Balaenoptera borealis</i>	sei whale	E	N
*	<i>Balaenoptera musculus</i>	blue whale	E	N
*	<i>Balaenoptera physalus</i>	fin whale	E	N
*	<i>Eumetopias jubatus</i>	Steller (=northern) sea-lion	T	Y
*	<i>Megaptera novaengliae</i>	humpback whale	E	N
*	<i>Physeter macrocephalus</i>	sperm whale	E	N

Attachment C

SHPO Correspondence



November 23, 2010

7119.00

State of California
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

Attention: Tristan Tozer, State Historian I

Subject: New Building Construction, Open Door Community Health Centers
Tydd Street Site, Eureka, Humboldt County, California
HRSA Grant Number C8ACS21261, Project Number 81852-02

Dear Mr. Tozer:

On October 28, 2010, LACO Associates (LACO) submitted a request for consultation pursuant to Section 106 for a property known as the Halverson Property at the Eureka Waterfront. In subsequent discussions with you, the need for photographs and a copy of geological reports were desired in order for the SHPO to complete the Section 106 process for the Halverson Property. Since that time, the proposed Open Door Health Center has chosen an alternative site that is more suitable for the proposed project. Please consider this as a request to suspend the consultation for the Halverson Property. We reserve, however, the option of reentering a consultation process for this property at a later time if necessary.

As you may recall the Open Door Community Health Centers engaged LACO to conduct an environmental assessment pursuant to the U.S. Department of Health and Human Services (HHS) General Administration Manual Part 30 Environmental Protection Requirements for the proposed construction of a new health care facility. As an undertaking by the Health Resources and Services Administration, both the Wiyot Tribe and SHPO are the primary reviewers for Section 106 compliance.

Pursuant to the National Historic Preservation Act (P.L. 89-665), Preservation of Historic and Archaeological Data Act (P.L. 93-291), Executive Order 11593, and Protection and Enhancement of the Cultural Environment (36 CFR Part 800 or 801 as amended) agencies are to identify and take into account the adverse effect their proposed project may have on the historic and prehistoric resources in the Area of Potential Effect (APE).

The proposed undertaking with the Area of Potential Effect delineated is located within the Eureka Quadrangle and is indicated on the attached topographic map.

Since the new parcel is vacant, LACO commissioned Express Archaeological Solutions to conduct a cultural resources investigation. A copy of their report is attached.

Open Door Community Health Centers is proposing to construct a new medical facility at the currently vacant Halverson Park site. A preliminary conceptual plan has been prepared. As shown a two-story facility in excess of ±25,600 square-feet will be constructed within the City limits of Eureka with access being provided off of Tydd Street.

Since the proposed property is near the sensitive area of Tuluwat and totally within Wiyot ancestral territory, the APE for the proposed project may be within an area that is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage" or "[h]as yielded, or may be likely to yield, information important in prehistory or history," among other criteria). (CEQA Guidelines Sections 15064.5(a)(1)-(a)(3).)

However, as indicated on Page 22 of the attached report:

During the survey no cultural resources were identified. No isolated artifacts were found.

Since no cultural resources were located, and with regards to the research design, there is no way of determining the prehistoric occupants and land use of the area. However, it is known through ethnographic accounts that the Wiyot Tribe occupied this general location and likely used it for a gathering place. No historic artifacts or features were found.

Respectfully, we are requesting your concurrence that the proposed project will have no adverse effect on archeological or historic resources at the subject parcel if the mitigation requirements outlined in the cultural resources report are specified in the environmental assessment being prepared for the project.

We would appreciate a response as quickly as possible as the project has a rigorous timeframe.

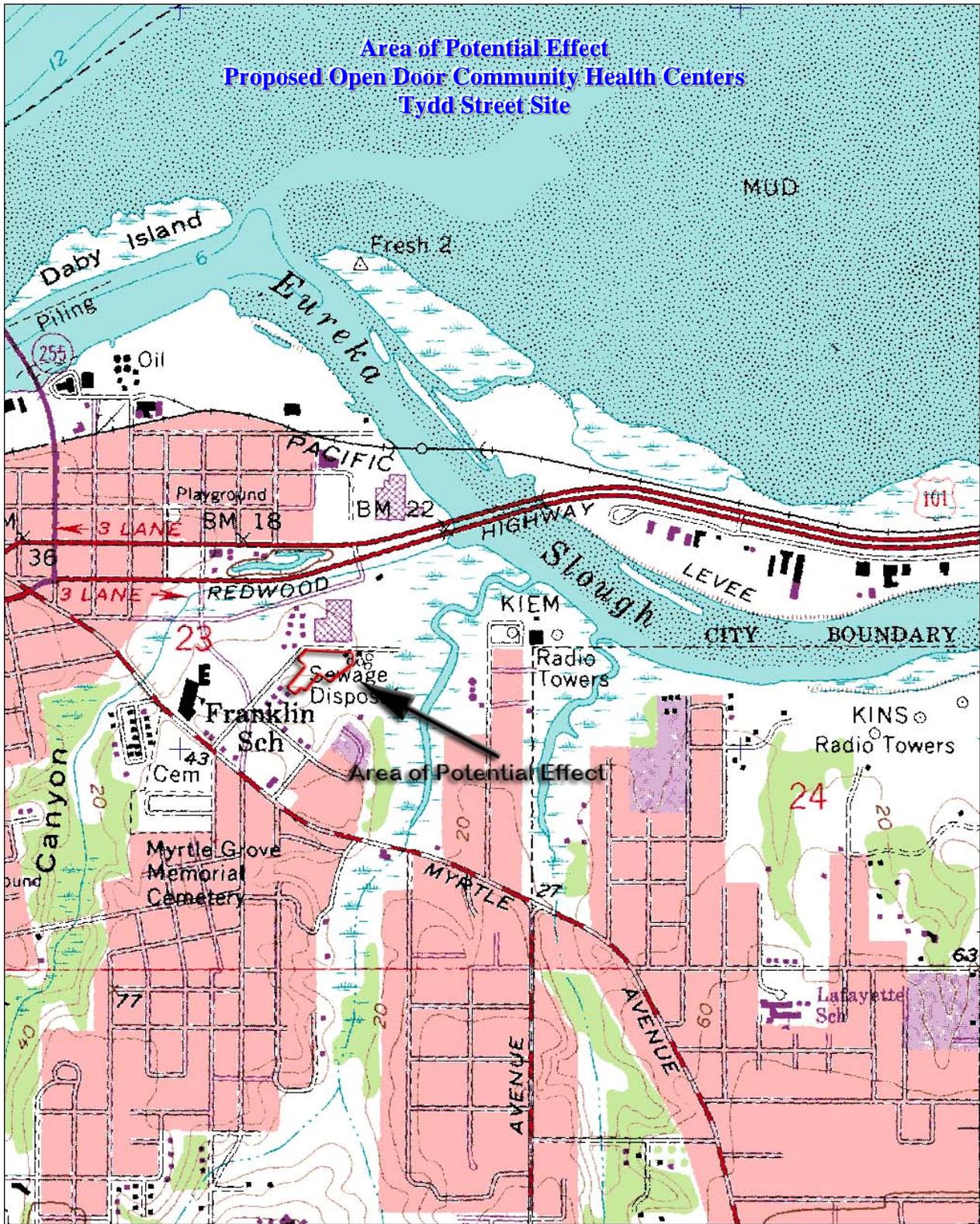
If you have any questions, please feel free to contact me at (707) 443-5054.

Sincerely,
LACO Associates



L. Robert Ulibarri, AICP/REA
Tribal Government Services Manager
Senior Planner

cc: Helene Rouvier, THPO, Wiyot Tribe





**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



December 10, 2010

Reply In Reference To: HRSA101101A

L. Robert Ulibarri
LACO Associates
P.O. Box 1023
21 West 4th Street
Eureka, CA 95502

RE: Section 106 Consultation for Clinic Construction, Tydd Street Site, Eureka, CA

Dear Mr. Ulibarri,

Thank you for initiating consultation with me on behalf of the Health Resource and Services Administration (HRSA) regarding Open Door Health Center's efforts to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and its implementing regulation found at 36 CFR Part 800. You are requesting I concur that the above-referenced undertaking will not affect historic properties.

Open Door Health Center intends to use funds administered through HRSA to build a clinic. The one or two-story building will be constructed on a vacant seven-acre parcel. Ground disturbance for the installation of footings and utilities is expected to range from three to six feet below ground level. In addition to your letter, you have submitted the following report in support of this undertaking:

- *A Cultural Resource Inventory for the Proposed Site of the New Open Door Community Health Center In Eureka, Humboldt County, CA* (David E. Wrobleski, LACO Associates: November 2010)

The subject parcel has traditionally served as an agricultural plot. However, the project area is within the vicinity of lands traditionally associated with the Wiyot Tribe. Qualified archeologists conducted archival research and performed a pedestrian survey of the site. The records search indicates that two cultural resource surveys encompassing the project area are on file at the North Coastal Information Center. Neither of these surveys indicates the presence of historic properties within the parcel. The consulting archeologists walked multiple, non-overlapping transects spaced at five-meter intervals across the parcel. Due to ground cover, visibility across the parcel was poor. No cultural artifacts were identified.

Having reviewed the submitted documentation, I have the following comments:

1) I concur that the Area of Potential Effects (APE) has been properly determined and documented pursuant to 36 CFR Parts 800.4 (a)(1) and 800.16 (d).

2) I further concur that the finding of No Historic Properties Affected is appropriate pursuant to 36 CFR Part 800.4(d)(1) and that the documentation supporting this finding has been provided pursuant to 36 CFR Part 800.11(d).

3) In conversation between you and Tristan Tozer of my staff, it has come to my attention that members of the Wiyot Tribe have expressed an interest in monitoring construction activities. I believe this is a reasonable request and recommend that you allow cultural monitors to observe all ground disturbing aspects of the project.

4) Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have additional future responsibilities for this undertaking under 36 CFR Part 800.

Thank you for considering historic resources during project planning. If you have any questions or comments, please contact Tristan Tozer of my staff at (916) 445-7027 or ttozer@parks.ca.gov.

Sincerely,

A handwritten signature in cursive script that reads "Susan K Stratton for".

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

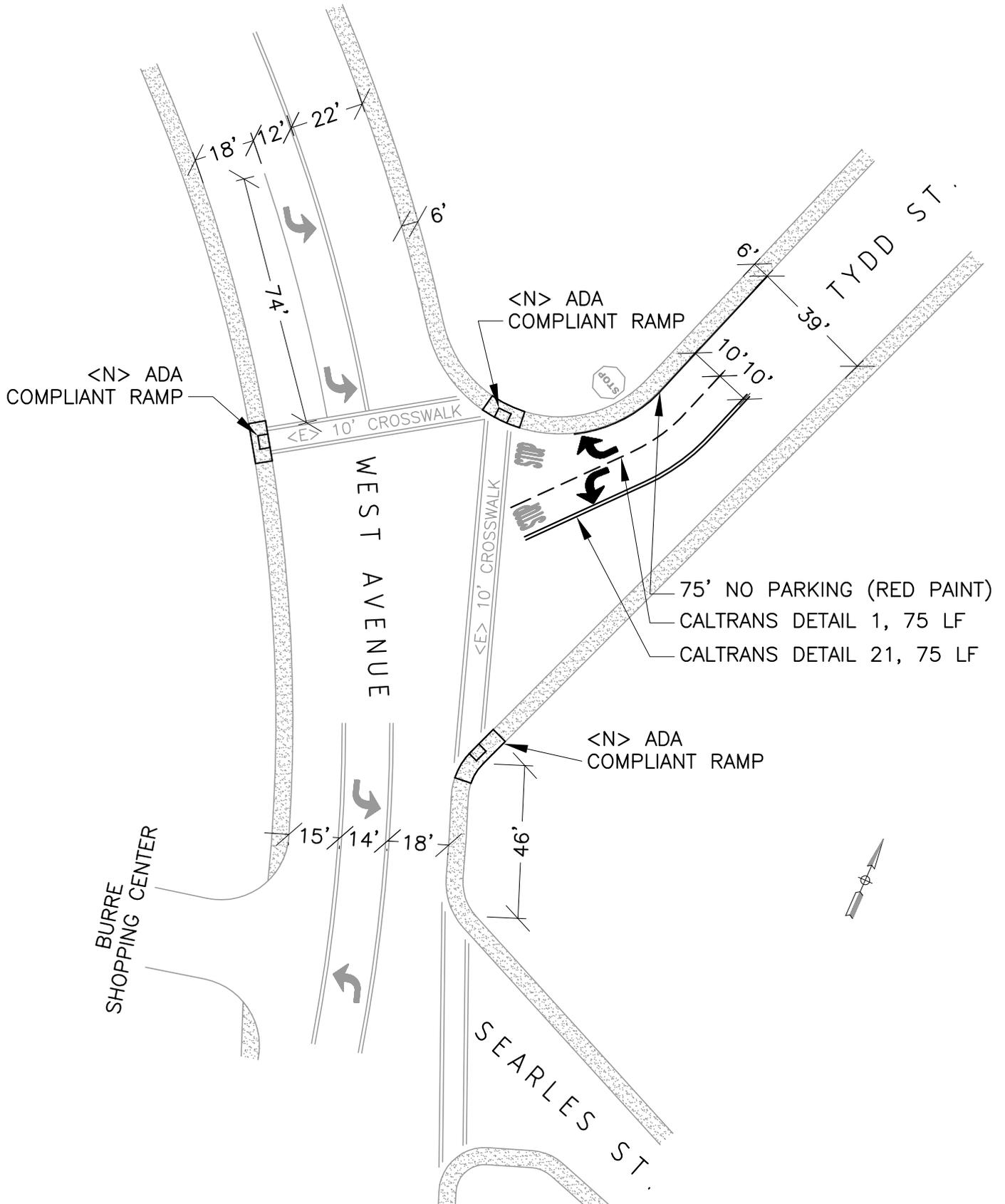
Attachment D

Proposed Tydd Street Reconfiguration



LACO ASSOCIATES
CONSULTING ENGINEERS
21 W 4TH ST. EUREKA, CA 95501 (707)443-5054

PROJECT	OPEN DOOR COMMUNITY HEALTH CENTER	BY	JDB	APPENDIX	E
CLIENT	OPEN DOOR COMMUNITY HEALTH CENTER	DATE	12/23/10	JOB NO.	
LOCATION	TYDD STREET, EUREKA, CA	CHECK	RLD		7119.06
	PROPOSED CONCEPTUAL INTERSECTION IMPROVEMENTS	SCALE	AS SHOWN		



Dec. 23, 2010-9:05am
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